REVISION HISTORY BG3R CHASSIS

MODEL

KV-XA25M80A
KV-XA29M80A

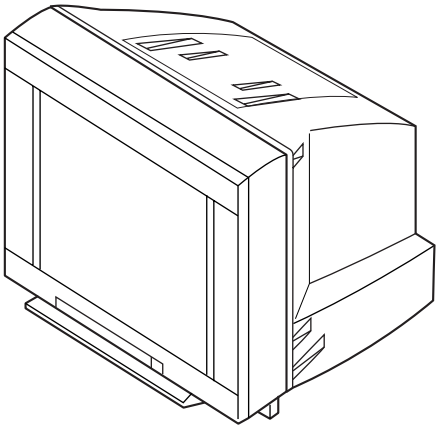
PART NO.: 9-872-309-01

NO.	SUFFIX	DATE	SUPP / CORR	DESCRIPTION
1	-01	2002/5	--	1st. Issue

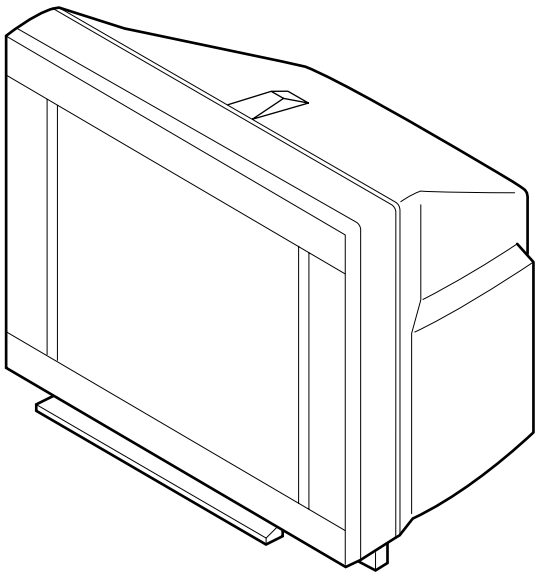
Self Diagnosis
Supported model

SERVICE MANUAL BG3R CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-XA25M80A	RM-952	Vietnam	SCC-U56H-A				
KV-XA29M80A	RM-952	Vietnam	SCC-U56G-A				



KV-XA25M80A



KV-XA29M80A

TRINITRON® COLOR TV

SONY®

SPECIFICATIONS

			Note
Power requirements	110-240 V AC, 50/60 Hz		
Power consumption (W)	Indicated on the rear of the TV		
Television system	B/G, I, D/K, M		
Color system	PAL, PAL 60, SECAM, NTSC3.58, NTSC4.43		
Channel coverage			
B/G	VHF: E2 to E12 UHF: E21 to E69 CATV: S01 to S03, S1 to S41		
I	UHF: B21 to B68 CATV: S01 to S03, S1 to S41		
D/K	VHF: C1 to C12, R1 to R12 UHF: C13 to C57, R21 to R60 CATV: S01 to S03, S1 to S41, Z1 to Z39		
M	VHF: A2 to A13 UHF: A14 to A79 CATV: A-8 to A-2, A to W+4, W+6 to W+84		
(Antenna)	75-ohm external terminal		
Audio output (Speaker)	5W + 5W		
Number of terminal			
Video	Input: 3* Output: 1	Phono jacks; 1 V_{P-P}, 75 ohms	*Two input lines available
Audio	Input: 3* Output: 1	Phono jacks; 500 mVrms	*Two input lines available
(Component Video)	Input: 1	Phono jacks; Y: Vp-p, 75 ohms, sync negative C_B: 0.7 Vp-p, 75 ohms C_R : 0.7 Vp-p, 75 ohms Audio : 500 mVrms	
(S-Video)	Input: 1	Y: 1 Vp-p, 75ohms, unbalanced, sync negative C: 0.286 Vp-p, 75 ohms	
(Headphone)	Output: 1	Stereo minijack	
Picture tube	25 in.	29 in.	
Tube size (cm)	64	72	Measured diagonally
Screen size (cm)	60	68	Measured diagonally
Dimension (w/h/d, mm)	696 × 513 × 500	772 × 576 × 516	
Mass (kg)	38	51	

Design and specifications are subject to change without notice.

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SELF DIAGNOSTIC FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER lamp will automatically begin to flash.
The number of times the lamp flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER lamp flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the remote commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

1. DIAGNOSTIC TEST INDICATORS

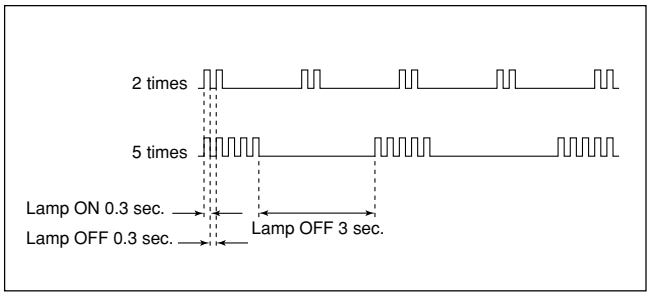
When an errors occurs, the STANDBY/TIMER lamp will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

Result for all of the following diagnostic items are displayed on screen. No error has occured if the screen displays a "0".

Diagnostic Item Description	No. of times STANDBY/TIMER lamp flashes	Self-diagnostic display/Diagnostic result	Probable Cause Location	Detected Symptoms
• Power does not turn on	Does not light	—	• Power cord is not plugged in. • Fuse is burned out F7601 (B9)	• Power does not come on. • No power is supplied to the TV. • AC power supply is faulty.
• +B overcurrent (OCP) or overvoltage (OVP) • Vertical deflection stopped • Horizontal deflection overdrive	2 times	002:000 or 002:001~255 003:001~255 004:001~255 at the same time	• H.OUT Q511 is shorted. (A board) • IC1800 is shorted. (C6 board) • -13V is not supplied. (A board) • IC 503 faulty (A board)	• Power does not come on. • Load on power line is shorted. • Has entered standby state after horizontal raster. • Vertical deflection pulse is stopped. • Power line is shorted or power supply is stopped.
• White balance failure (no PICTURE)	5 times	005:000 or 005:001~225	• G2 is improperly adjusted. (Note 2) • CRT problem. • Video OUT is faulty. (C6 board) • IC301 is faulty. (A board) • No connection A board to C6 board.	• No raster is generated. • CRT cathode current detection reference pulse output is small.
• Micro reset	—	101:00 or 101:001~225	• Discharge CRT (C6 Board) • Static discharge • External noise	• Power is shut down shortly, after this return back to normal. • Detect Micro latch up.

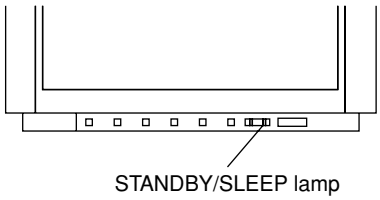
Note 1: If a + B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously.
The symptom that is diagnosed first by the microcontroller is displayed on the screen.
Note 2: Refer to screen (G2) Adjustment in section 3-4 of this manual.

2. DISPLAY OF STANDBY/TIMER LIGHT FLASH COUNT



Diagnostic Item	Flash Count*
+B overcurrent/overvoltage Vertical deflection stopped	2 times
White balance failure	5 times

* One flash count is not used for self-diagnostic.



3. STOPPING THE STANDBY/TIMER FLASH

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER lamp from flashing.

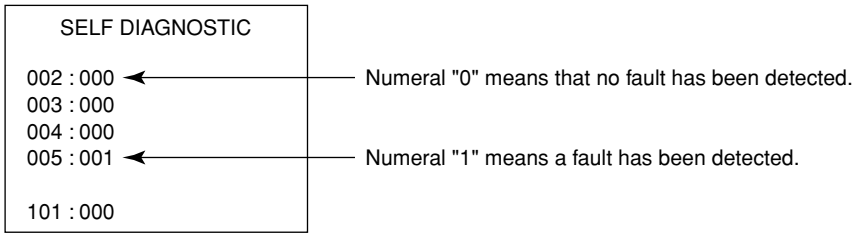
4. SELF-DIAGNOSTIC SCREEN DISPLAY

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurances of failure for confirmation on the screen:

[To Bring Up Screen Test]
In standby mode, press buttons on the remote commander sequentially in rapid succession as shown below:

Screen display ➡ channel 5 ➡ Sound volume - ➡ Power ON
⇧
Note that this differs from entering the service mode (mode volume +).

Self-Diagnosis screen display


SELF DIAGNOSTIC
002 : 000
003 : 000
004 : 000
005 : 001
101 : 000
Numeral "0" means that no fault has been detected.
Numeral "1" means a fault has been detected.

5. HANDLING OF SELF-DIAGNOSTIC SCREEN DISPLAY

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.

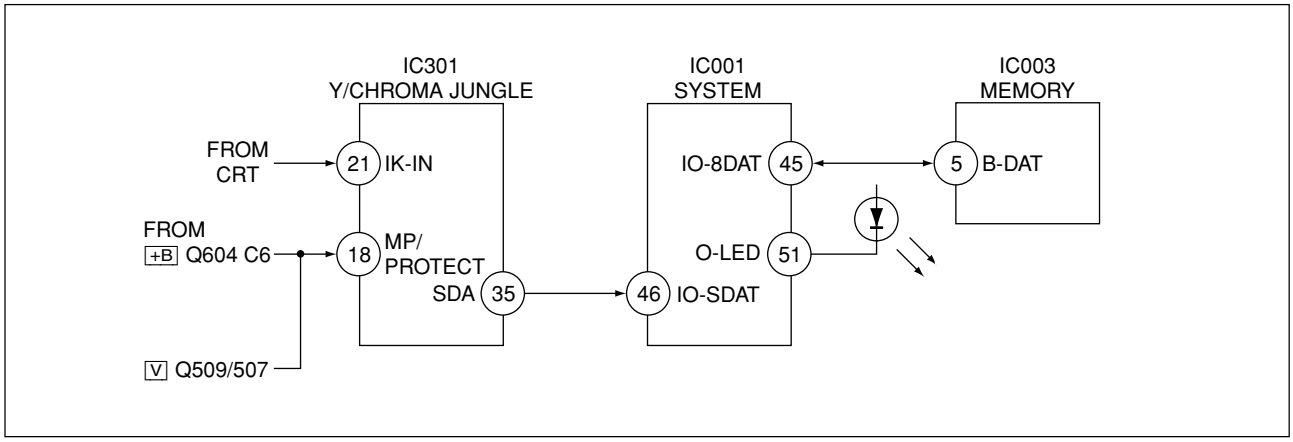
Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

[Clearing the result display]
To clear the result display to “0”, press buttons on the remote commander sequentially as shown below when the diagnostic screen is being displayed.

Channel [8] ➡ 0

[Quitting Self-diagnostic screen]
To quit the entire self-diagnostic screen, turn off the power switch on the remote commander or the main unit.

6. SELF-DIAGNOSTIC CIRCUIT

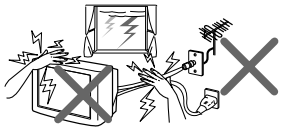


+B overcurrent (OCP)	Occurs when an overcurrent on the +B(135) line is detected by Q604. If Q604 go to ON and the voltage to pin 18 of IC301 should go down when V.SYNC is more than seven verticals in a period, the unit will automatically turn off.
Vertical deflection stopped	Occurs when an absence of the vertical deflection pulse is detected by Q509 and IC001 shut down the power supply.
Vertical deflection overcurrent	Occurs when an overcurrent on V drive line is detected by Q507. Power supply will be shut down when detect this by IC001.
White balance failure	If the RGB levels* do not balance or become low level within 5 seconds, this error will be detected by IC301. TV will stay on, but there will be no picture. * (Refers to the RGB levels of the AKB detection Ref pulse that detects IK.)

The operating instruction mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

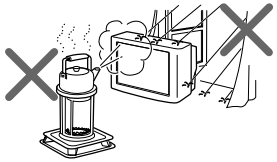
WARNING

- Dangerously high voltages are present inside the TV.
- Operate the TV only between 110 – 240 V AC.

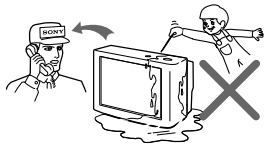


For your own safety, do not touch any part of the TV, the power cord and the antenna cable during lightning storms.

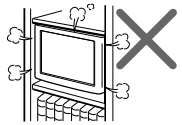
For children's safety, do not leave children alone with the TV. Do not allow children to climb onto it.



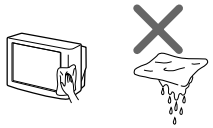
To prevent fire or shock hazard, do not expose the TV to rain or moisture.



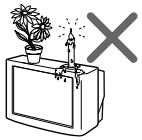
Do not operate the TV if any liquid or solid object falls into it. Have it checked immediately by qualified personnel only.



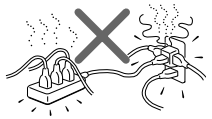
Do not block the ventilation openings of the TV. Do not install the TV in a confined space, such as a bookcase or built-in cabinet.



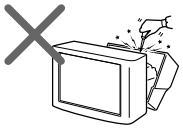
Clean the TV with a dry and soft cloth.
Do not use benzine, thinner, or any other chemicals to clean the TV. Do not scratch the picture tube.



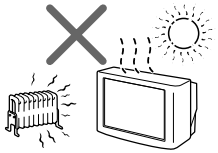
Do not place any objects on the TV.



Do not plug in too many appliances to the same power socket. Do not damage the power cord.



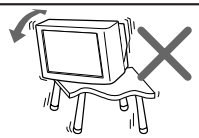
Do not open the cabinet and the rear cover of the TV as high voltages and other hazards are present inside the TV. Refer servicing and disposal of the TV to qualified personnel.



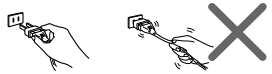
Your TV is recommended for home use only.
Do not use the TV in any vehicle or where it may be subject to excessive dust, heat, moisture or vibrations.

SECTION 1
GENERAL

WARNING (continued)



Install the TV on a stable TV stand and floor which can support the TV set weight. Ensure that the TV stand surface is flat and its area is larger than the bottom area of the TV.



Pull the power cord out by the plug. Do not pull the power cord itself. Even if your TV is turned off, it is still connected to the AC power source (mains) as long as the power cord is plugged in. Unplug the TV before moving it or if you are not going to use it for several days.

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RM-952

Getting Started

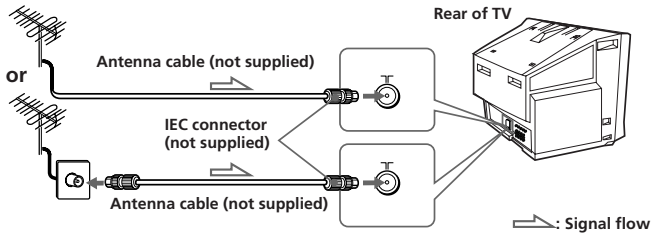
CAUTION

- Do not plug in the power cord until you have completed making all other connections; otherwise a minimum leakage current might flow through the antenna and other terminals to ground.
- To avoid battery leakage and damage to the remote, remove the batteries from the remote if you are not going to use it for several days. If any liquid that leaks from the batteries touches you, immediately wash it away with water.

Step 1

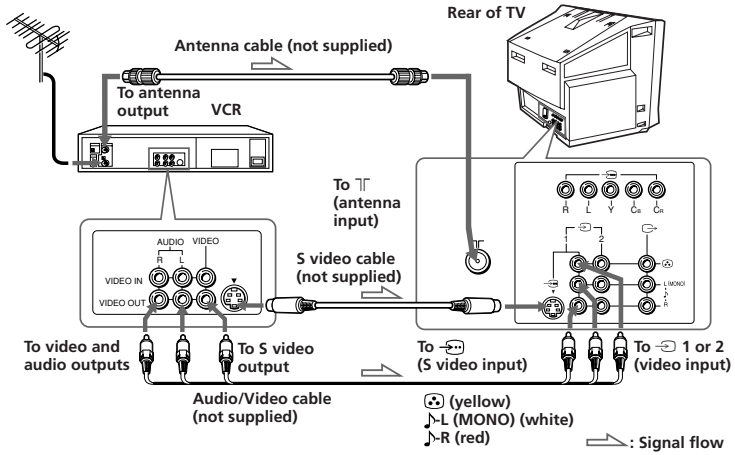
Connect the antenna

If you wish to connect a VCR, see the **Connecting a VCR** diagram below.



Connecting a VCR

To watch the video input, press ⊖ (see page 13).

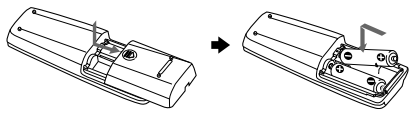


Notes

- If you connect a monaural VCR, connect the yellow plug to (the yellow jack) and the black plug to ♪-L (MONO) (the white jack).
- If you connect a VCR to the ⊤ (antenna input) terminal, preset the signal output from the VCR to the program number 0 on the TV.
- If both ⊖ (S video input) and ⊖ 1 (video input) at the rear of your TV are input at the same time, the ⊖ (S video input) is automatically selected. To view the video input to ⊖ 1 (video input), disconnect the S video cable.
- Do not connect video equipment to the ⊖ 2 (video input) jacks at the front and the rear of your TV at the same time; otherwise the picture will not be displayed properly on the screen.
- When no signal is input from the connected video equipment, the TV screen becomes blue.

Step 2

Insert the batteries into the remote

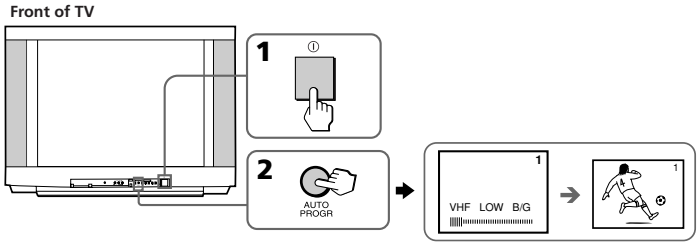


Note

- Do not use old batteries nor use different types of batteries together.

Step 3

Preset the channels automatically



Tips

- If you want to stop automatic channel presetting, press SELECT twice.
- If your TV has preset an unwanted channel or cannot preset a particular channel, then preset your TV manually (see page 10).

Note

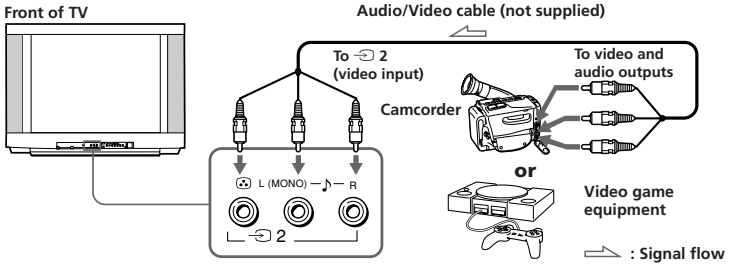
- During automatic channel presetting, your TV screen will indicate “B/G”, “I”, “D/K” or “M” for the TV system.

Connecting optional components

You can connect optional audio/video components, such as a VCR, multi disc player, DVD, camcorder, video game or stereo system.

To watch the video input of the connected equipment, press ⊜ (see page 13).

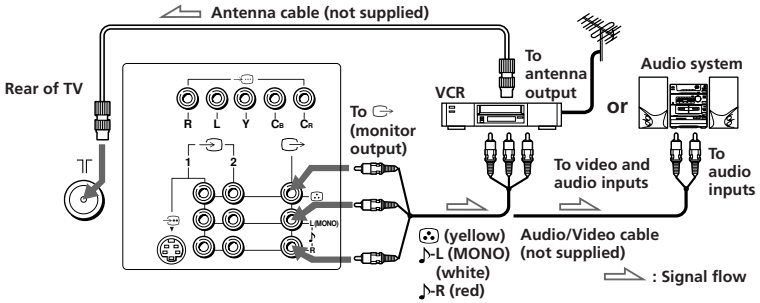
Connecting a camcorder/video game equipment using the ⊜ (video input) jacks



Notes

- You can also connect video equipment to the ⊜ 1 or 2 (video input) jacks at the rear of your TV.
- Do not connect video equipment to the ⊜ 2 (video input) jacks at the front and the rear of your TV at the same time; otherwise the picture will not be displayed properly on the screen.

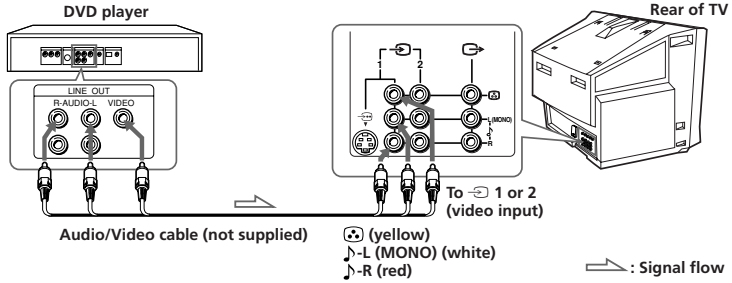
Connecting audio/video equipment using the ⊃ (monitor output) jacks



Note

- If you select "DVD" on your TV screen, the signal from the ⊃ (monitor output) jack will not be output properly. This does not indicate a malfunction.

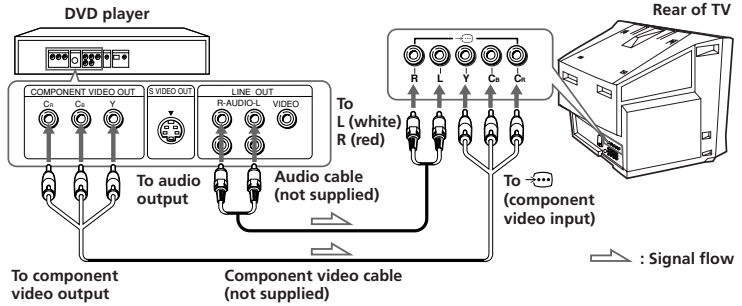
Connecting a DVD player using the ⊜ (video input) jacks



Connecting a DVD player using the ⊜ (component video input) jacks

1 Connect R and L under ⊜ (component video input) on your TV to the LINE OUT, AUDIO R and L output connectors on your DVD player.

2 Connect Y, C_B, and C_R under ⊜ (component video input) on your TV to the COMPONENT VIDEO OUT Y, C_B, and C_R output connectors on your DVD player.



Notes

- If your DVD player can output interlace and progressive mode signals, select the interlace output when connecting to ⊜ (component video input) on your TV. Your TV can receive either 525i/60Hz or 625i/50Hz interlace signals.
- Some DVD player terminals may be labeled differently:

Connect	To (on the DVD player)
Y (green)	Y
C_B (blue)	C_b, B-Y or P_B
C_R (red)	C_r, R-Y or P_R

- Since the high quality pictures on a DVD disc contain a lot of information, picture noise may appear. In this case, adjust the sharpness (see **Adjusting the picture and sound settings** on page 16).

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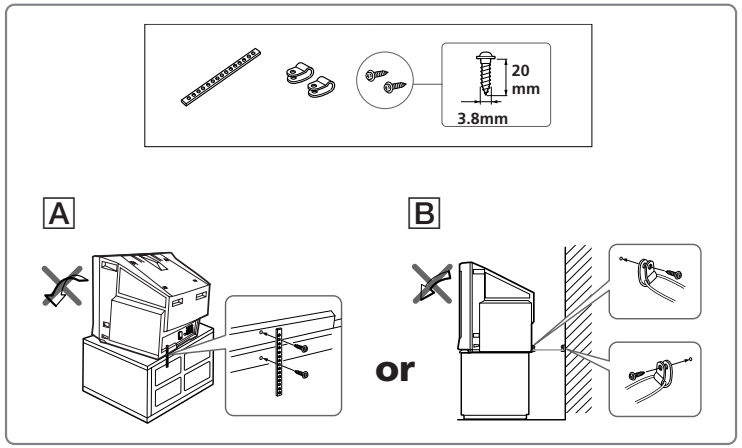
Securing the TV

To prevent the TV from falling, secure the TV using one of the following methods:

A With the supplied screws, attach the band to the TV stand and to the rear of the TV using the provided hole.

or

B Put the cord or chain through the clamps to secure the TV against a wall or pillar.

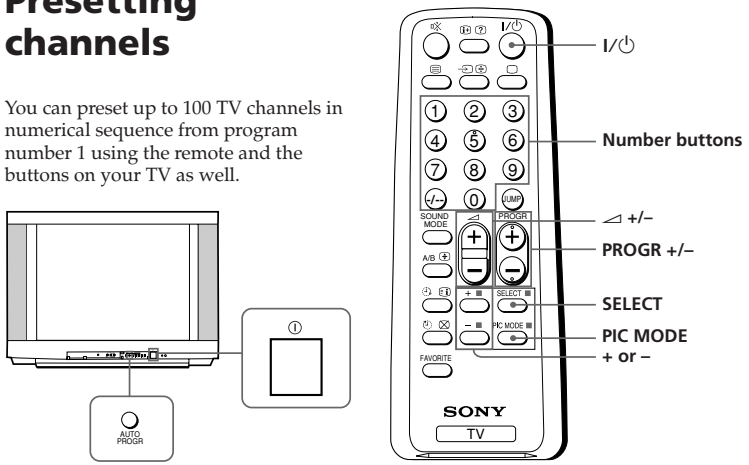


Note

- Use only the supplied screws. Use of other screws may damage the TV.

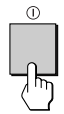
Presetting channels

You can preset up to 100 TV channels in numerical sequence from program number 1 using the remote and the buttons on your TV as well.



Presetting channels automatically

1 Press ⏻ to turn on the TV.



2 Press AUTO PROGR.

Note

- During automatic channel presetting, your TV screen will indicate "B/G", "I", "D/K" or "M" for the TV system.

To preset channels automatically from a specified program number

(1) Press SELECT until "AUTO PROGRAM" appears.

(2) Press + or – to enter the "AUTO PROGRAM" mode.
The on-screen display will start flashing.

(3) Press PROGR +/– or the number buttons until the desired program number appears.

(4) Press + or – to start presetting channels automatically.

continued

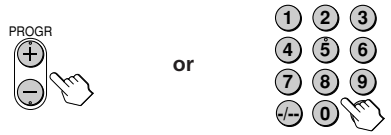
Presetting channels (continued)

Presetting channels manually

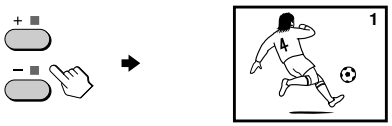
1 Press SELECT until "MANUAL PROGRAM" appears.

2 Press + or – to enter the "MANUAL PROGRAM" mode.

3 Press PROGR +/– or the number buttons until the desired program number appears.



4 Press + or – until the desired channel picture appears.

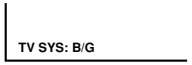


5 Press SELECT to exit the "MANUAL PROGRAM" mode.

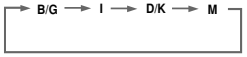
To change the TV system setting

If the picture or sound is abnormal when receiving programs through the ⅂ (antenna input) terminal.

(1) Press SELECT until "TV SYS" appears.



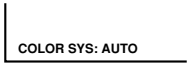
(2) Press + or – to select the appropriate TV system until the picture or sound quality is optimal.



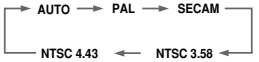
To change the color system setting

If the color is abnormal when receiving programs through the ⅂ (antenna input) terminal or the ⇥ (video input) jack

(1) Press SELECT until "COLOR SYS" appears.



(2) Press + or – to select the appropriate color system until the color is optimal.



Tip

- Normally set "COLOR SYS" to "AUTO".

Skipping program numbers

1 Press PROGR +/– or the number buttons until the unused or unwanted program number appears.

2 Press SELECT until "MANUAL PROGRAM" appears.

3 Press + or – to enter the "MANUAL PROGRAM" mode.

4 Press PIC MODE.

5 Press SELECT to exit the "MANUAL PROGRAM" mode.

Note

- To restore the skipped program number again, preset the channel automatically or manually.

Tip

- You can also use SELECT and ◿ +/– on the TV to preset channels and skip program numbers.

To use the fine tuning (FINE) function

The fine tuning (FINE) function may help to reduce the following problems: double images and lines moving across the TV screen.

You can use the fine tuning function as below:

(1) Select the program number you want to adjust.
(2) Press SELECT until "MANUAL PROGRAM" appears.
(3) Press + or – to enter the "MANUAL PROGRAM" mode.
(4) Press ⊕ to display "FINE" on the screen.
(5) Press + or – continuously until the above problems are minimized. The + or – icon on the screen flashes while tuning.
(6) Press SELECT to exit the "MANUAL PROGRAM" mode.

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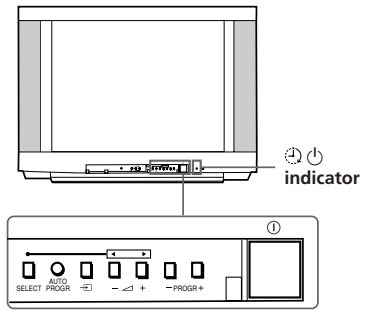
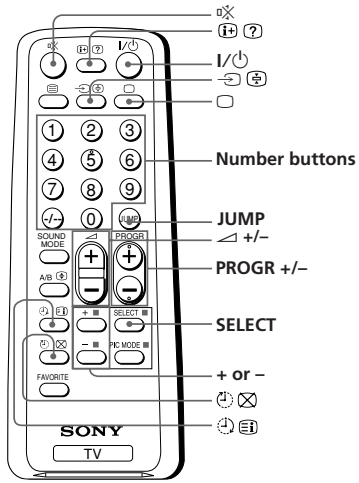
Watching the TV

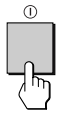
This section explains functions used while watching the TV. Most operations can be done using the remote.





1 Press ⏀ to turn on the TV.

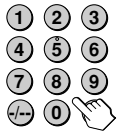
When the TV is in the standby mode (the ⏻ indicator on the TV is lit red), press **I**/⏻ on the remote or PROGR +/– on the TV.



2 Press PROGR +/– or the number buttons to select the program number.

For double digit numbers, press -/--, then the number (e.g., for 25, press -/--, then 2 and 5).

or



3 Press +/– to adjust the volume.

Additional tasks

To	Press
Turn off temporarily	**I**/⏻. The ⏻ indicator on the TV lights up red.
Turn off completely	⏀ on the TV.
Mute the sound	🔇.
Watch the video input (VCR, camcorder, etc.)	⏎ to select "VIDEO 1" , "VIDEO 2" or DVD. To return to the TV program, press ▢ or ⏎ on the TV.
Jump back to the previous program number	JUMP.
Display the on-screen information*	ⓘ.
Adjust the volume of all program numbers automatically	SELECT repeatedly until "INTELLIGENT VOL" appears, then press + or – to select "ON". To cancel, select "OFF".
Adjust the picture position when it is not aligned to the TV screen	SELECT repeatedly until "PIC ROTATION" appears, then press + or – to adjust the alignment of the picture position. PIC ROTATION The ↴ or ↴ icon on the screen flashes while adjusting.

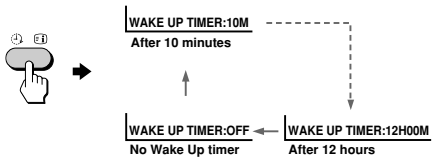
* The picture, sound, and either the program number or video input are displayed. The on-screen display for the picture and sound information disappears after about three seconds.

continued

Setting the Wake Up timer

1 Press ◴ until the desired period of time appears.

The Wake Up timer starts immediately after you have set it.



2 Select the program number or video input you want to display when you wake up.

3 Press I/⏻ or set the Sleep timer if you want the TV to turn off automatically.

The ◴ indicator on the TV lights up orange.

To cancel the Wake Up timer

Press ◴ until "WAKE UP TIMER: OFF" appears or turn off the TV's main power.

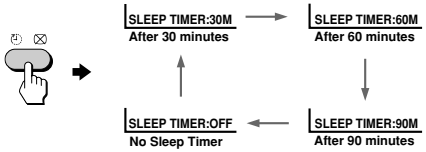
Note

- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up timer, the TV automatically goes into the standby mode. To continue watching the TV, press any button or control on the TV or the remote.

Setting the Sleep timer

Press ◴ until the desired period of time appears.

The Sleep timer starts immediately after you have set it.



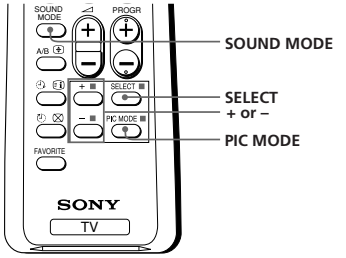
To cancel the Sleep timer

Press ◴ until "SLEEP TIMER: OFF" appears or turn the TV off.

Customizing the picture and sound

You can customize the picture and sound by selecting the picture and sound modes or by adjusting its settings.

You can change the sound effect by selecting the surround mode.



Selecting the picture and sound modes

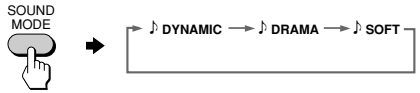
To select the picture mode

Press PIC MODE repeatedly until you get the desired picture mode.

Select	To
"DYNAMIC"	view high contrast pictures.
"STANDARD"	view normal contrast pictures.
"SOFT"	view mild pictures.

To select the sound mode

Press SOUND MODE repeatedly until you get the desired sound mode.



Select	To
"DYNAMIC"	listen to dynamic and clear sound that emphasizes the low and high sound.
"DRAMA"	listen to sound that emphasizes vocals and background music.
"SOFT"	listen to soft sound.

continued

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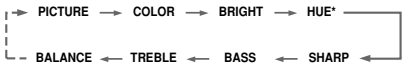
Customizing the picture and sound (continued)

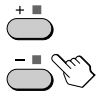
Adjusting the picture and sound settings

1 Press SELECT until the desired setting appears.

Each time you press SELECT, the setting item will change as follows:



2 Press + or – to adjust the item.



3 To adjust other items, repeat steps 1 to 2.

* "HUE" can be adjusted for the NTSC system only.

Notes

- When you select a picture or sound mode, the adjusted settings will be reset according to the selected mode.
- You can also use SELECT and +/– on the TV to adjust the picture and sound settings.

Selecting the wide mode

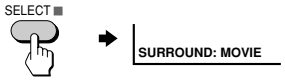
1 Press SELECT repeatedly until "WIDE MODE" appears.

2 Press + or – to select "ON".

Select	To
"ON"	change the picture size when receiving wide mode (16:9) picture signal.
"OFF"	turn off the wide mode.

Selecting the surround mode

1 Press SELECT repeatedly until "SURROUND" appears.

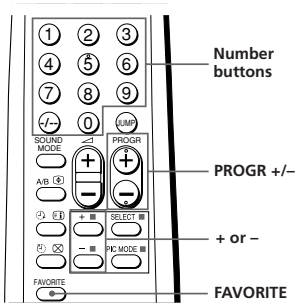


2 Press + or – to select the desired surround sound.

Select	To
"MOVIE"	listen to sound that spreads out over a large area, giving the feeling of being at a movie theatre.
"MUSIC"	listen to the sound that gives the feeling of being at a live concert.
"OFF"	turn off the surround sound.

Viewing your favorite channels

You can display six of your favorite channels for quick and easy selection. You can program the favorite channel as well.

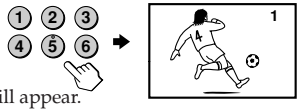


Selecting a favorite channel

1 Press FAVORITE.

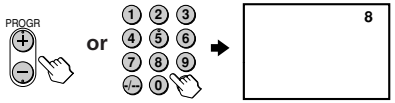
2 Press the number button from 1 to 6 to select the desired favorite channel.

When you use the "FAVORITE CH" feature for the first time, six preset channels will appear.



Programming the favorite channel

1 Press PROGR +/– or number buttons to select the program number you want to program (e.g. program number 8).



2 Press SELECT until "FAVORITE CH SETUP" appears.

3 Press + or – to select the favorite channel you want to program (e.g. ③).

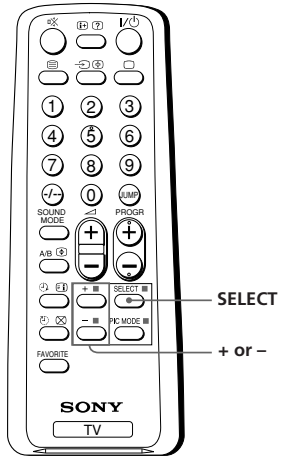
4 Press SELECT.

The selected favorite channel (e.g.,③) turns red for about one second.

5 To program other favorite channels, repeat steps 1 to 4.

Blocking the channels (CHILD LOCK)

You can lock some program numbers to prevent children from watching certain channels by using the buttons on the remote control.



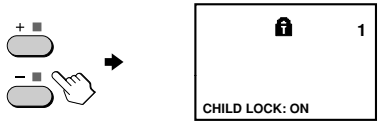
1 Select the program number you want to lock.

2 Press SELECT until "CHILD LOCK" appears on the screen.

3 Press + or – to select "ON".

The 🔒 symbol appears on the screen.

To cancel, press + or – to select "OFF". The 🔒 symbol disappears from the screen.



Note

- If you preset a locked program number, that particular program number will be unlocked automatically.

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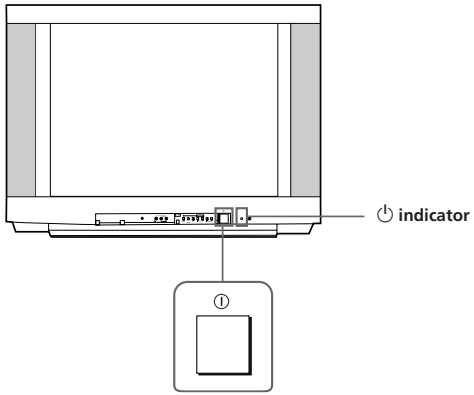
Self-diagnosis function

Your TV is equipped with a self-diagnosis function. If there is a problem with your TV, the ⏻ indicator flashes red. The number of times the ⏻ indicator flashes indicates the possible causes.

Front of TV



1 Check that the ⏻ indicator flashes red several times between three second intervals.

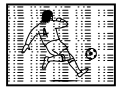
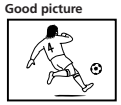
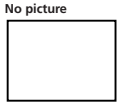
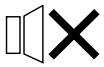
2 Count the number of times the ⏻ indicator flashes.

3 Press ⏀ (main power) to turn off your TV.

4 Inform your nearest Sony service center about the number of times the ⏻ indicator flashes.
Be sure to note the model name and serial number located on the rear of your TV.

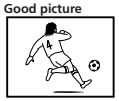
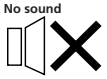
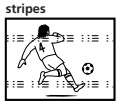
Troubleshooting

If you find any problem while viewing your TV, please check the following guide. If any problem persists, contact your Sony dealer .

Symptom	Possible cause	Solutions	Page
Snowy picture 	• Connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and on the wall.	4
	• Channel presetting is inappropriate or incomplete.	• Press SELECT until "MANUAL PROGRAM" appears on the screen, then preset the channel again.	10
Noisy sound	• The antenna type is inappropriate.	• Check the antenna type (VHF/UHF). Contact a Sony dealer for advice.	–
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Signal transmission is low.	• Try using a booster.	–
Distorted picture	• Broadcast signals are too strong.	• Turn off or disconnect the booster if it is in use.	–
Noisy sound			
Good picture 	• The TV system setting or channel presetting is inappropriate or incomplete.	• If the sound of all the channels are noisy, check the TV system (TV SYS) setting, then press AUTO PROGR to preset the channels again.	9
		• If the sound of some channels are noisy, select the channel, then select the appropriate TV system (TV SYS).	10
Noisy sound			
No picture 	• The power cord, antenna or VCR is not connected.	• Check the power cord, antenna and the VCR connections.	4
	• The TV is not turned on.	• Press I/⏻ (power).	12
		• Press ⏀ (main power) on the TV to turn off the TV for about five seconds, then turn it on again.	12
No sound 			

continued

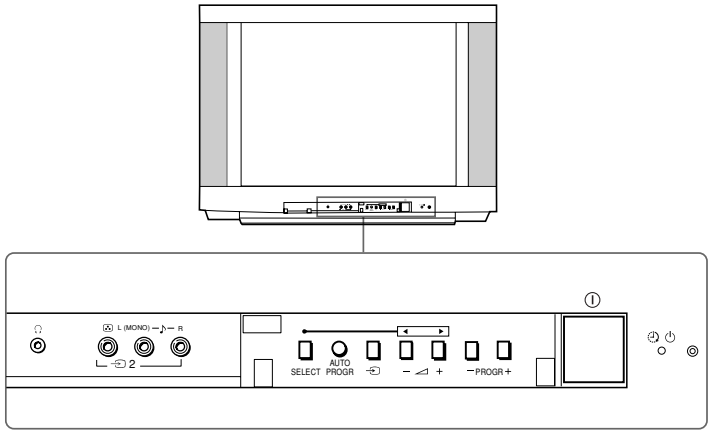
Troubleshooting (continued)

Symptom	Possible cause	Solutions	Page
Good picture 	• The volume level is too low.	• Press + to increase the volume level.	12
	• The sound is muted.	• Press to cancel the muting.	13
No sound 			
Dotted lines or stripes 	• There is local interference from cars, neon signs, hair dryers, power generators, etc.	• Do not use a hair dryer or other equipment near the TV. • Adjust the antenna direction for minimum interference. Contact a Sony dealer for advice.	– –
Double images or "ghosts" 	• Broadcast signals are reflected by nearby mountains or buildings.	• Use a highly directional antenna. • Use the fine tuning (FINE) function.	– 11
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Use of a booster is inappropriate.	• Turn off or disconnect the booster if it is in use.	–
No color 	• The color level setting is too low.	• Press SELECT until "COLOR" appears on the screen, then press + or – to adjust the color level.	16
	• The color system setting is inappropriate.	• Press SELECT until "COLOR SYS " appears on the screen, then check the color system setting (usually set this to "AUTO").	11
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
Abnormal color patches 	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may affect the TV.	• Keep external speakers or other electrical equipment away from the TV. Do not move the TV while the TV is turned on. Press ⏻ (main power) on the TV to turn off the TV for about 15 minutes, then turn it on again.	–

Symptom	Possible cause	Solutions	Page
Picture slant 	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may affect the TV.	• Keep external speakers or other electrical equipment away from the TV. • Press SELECT until "PIC ROTATION" appears on the screen, then press + or – to adjust the picture position until it is optimal.	– 13
Lines moving across the TV screen.	• There is interference from external sources, e.g., heavy machineries, nearby broadcast station.	• Use the fine tuning (FINE) function.	11
The ⏻ indicator on your TV flashes red several times between three second intervals.	• Your TV may need service.	• Contact your nearest Sony service center.	20
TV cabinet creaks.	• Changes in room temperature sometimes make the TV cabinet expand or contract, making a noise. This does not indicate a malfunction.	—	–
A "boom" sound is heard when the TV is turned on.	• The TV's demagnetizing function is working. This does not indicate a malfunction.	—	–

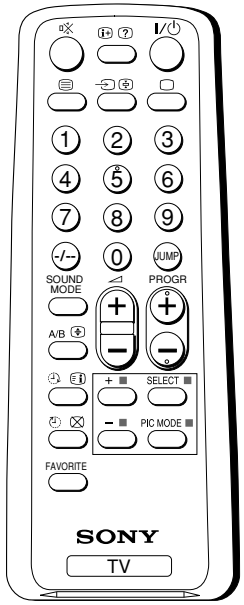
Overview of controls

TV front panel



Button	Function	Page
AUTO PROGR	Preset channels automatically.	5
SELECT	Select the desired item.	11
PROGR +/–	Select program number.	12
⏻	Turn off completely or turn on the TV.	12
+/–	Adjust volume.	12
⏻	Standby indicator.	12
⏎	Select TV or video input.	13
🕒	Wake Up indicator.	14
🎧	Headphone jack.	–

Remote Control



The names/symbols of buttons on the remote are indicated in different colors to represent the available functions.

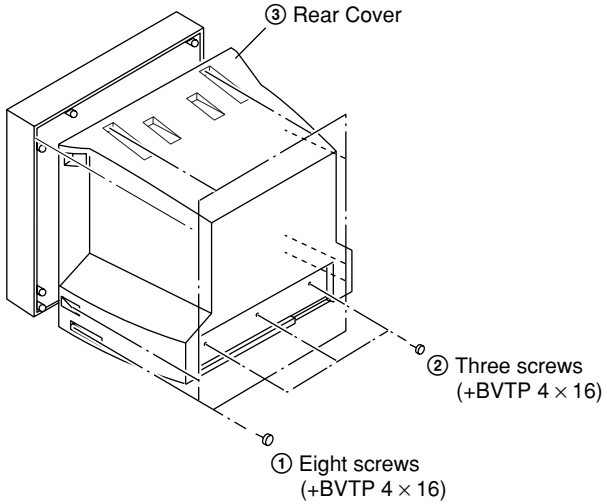
Label color	Button function
White	For general TV operations
Green	For Teletext operations

Button	Function	Page
SELECT	Select the desired item.	10
+/–	Adjust value.	10
PROGR +/–	Select program number.	12
0 – 9, -/--	Input numbers.	12
+/–	Adjust volume.	12
⏻	Turn off temporarily or turn on the TV.	12
⏎	Select TV or video input.	13
▢	Display the TV program.	13
🔇	Mute the sound.	13
ⓘ	Display on-screen information.	13
JUMP	Jump to previous program number.	13
Timer operations		
🕒	Set TV to turn on automatically.	14
🕒	Set TV to turn off automatically.	14
PIC MODE	Select picture mode.	15
SOUND MODE	Select sound mode.	15
FAVORITE	Display favorite channels.	18
Stereo/bilingual operations		
A/B	Not function for your TV.	–
Teletext operations		
☰	Not function for your TV.	–
ⓘ		
⊕		
?		
⊕		
⊠		
■ (red, green, yellow, blue)		

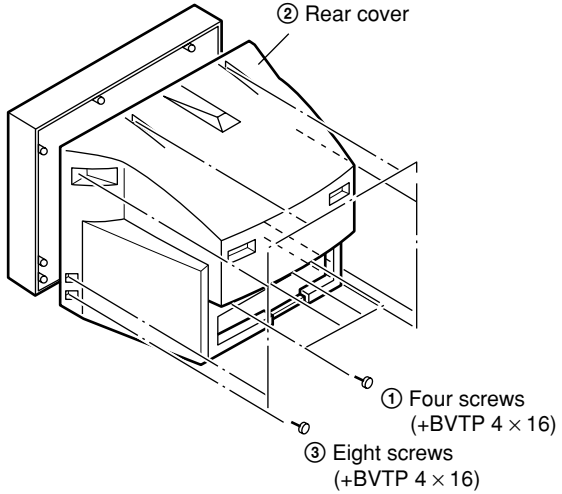
SECTION 2
DISASSEMBLY

2-1. REAR COVER REMOVAL

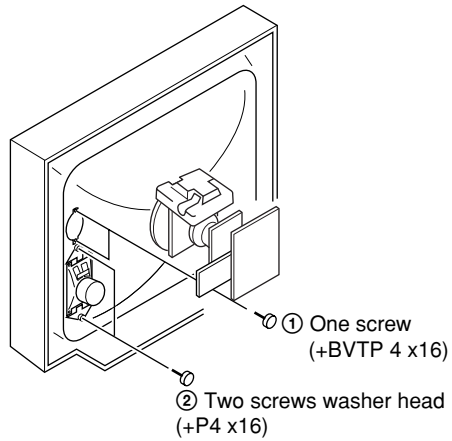
(KV-XA25M80A)



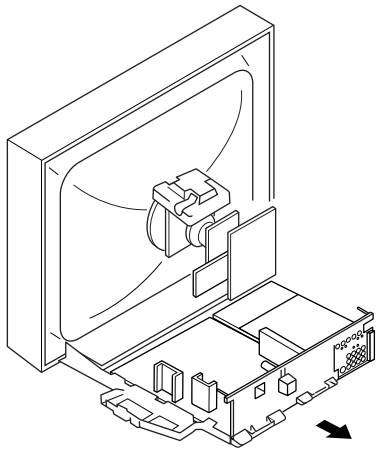
(KV-XA29M80A)



2-2. SPEAKER REMOVAL

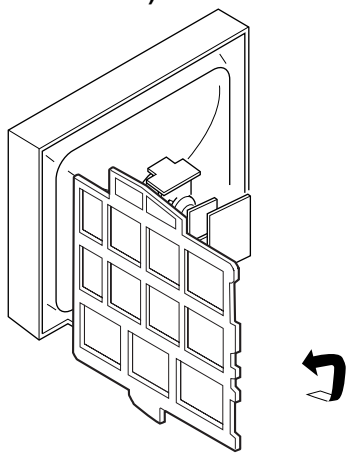


2-3. CHASSIS ASSY REMOVAL

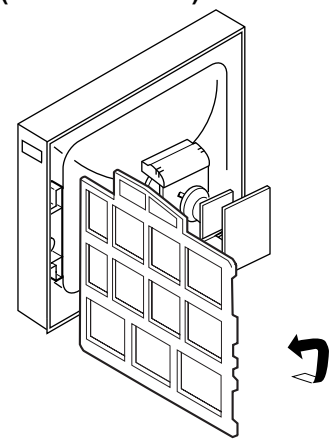


2-4. SERVICE POSITION

(KV-XA29M80A)



(KV-XA25M80A)

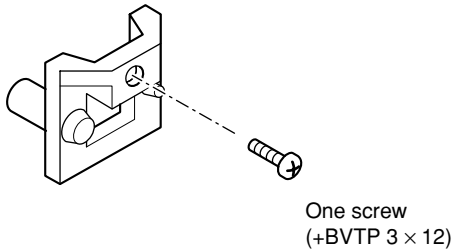


Note: Undress necessary wires that creates tension while placing the chassis into Service Position.

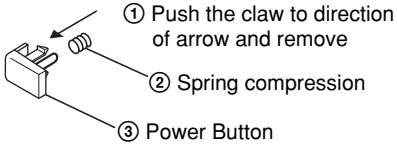
2-5. REPLACEMENT OF PARTS

For replacement of the Multi Button and Light Guide, unscrew them, exchange with the new parts, and fix them with screws (+BVTP) respectively.

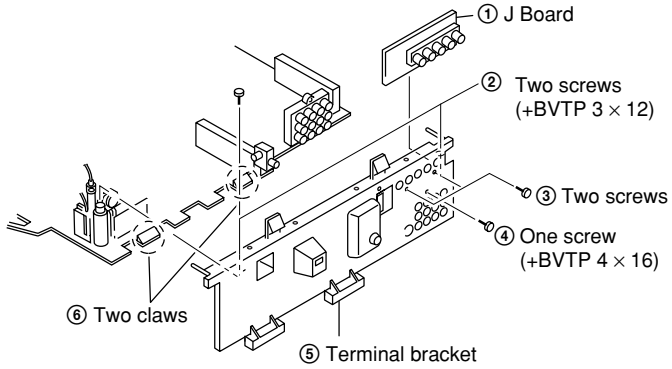
2-5-1. REPLACEMENT OF MULTI BUTTON



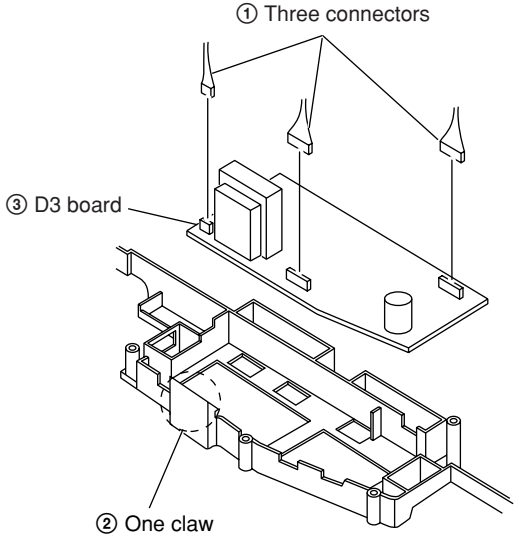
2-5-2. REPLACEMENT OF LIGHT GUIDE



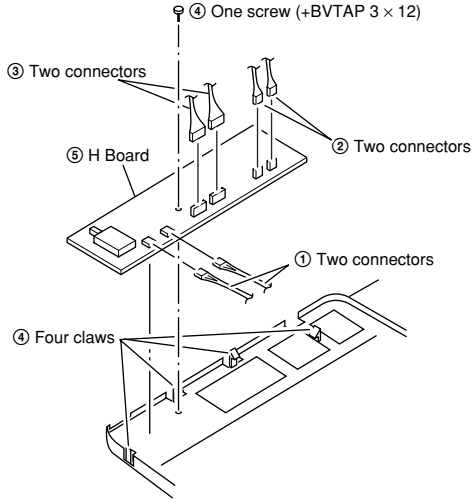
2-6. J BOARD AND TERMINAL BRACKET REMOVAL



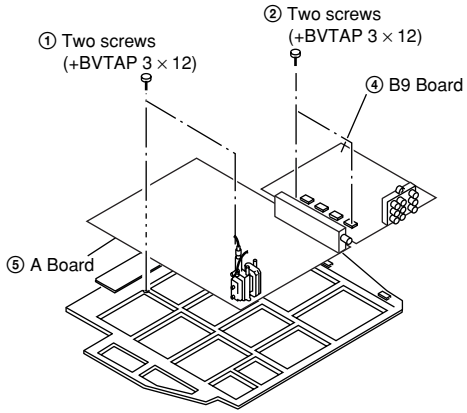
2-7. D3 BOARD REMOVAL (KV-XA29M80A)



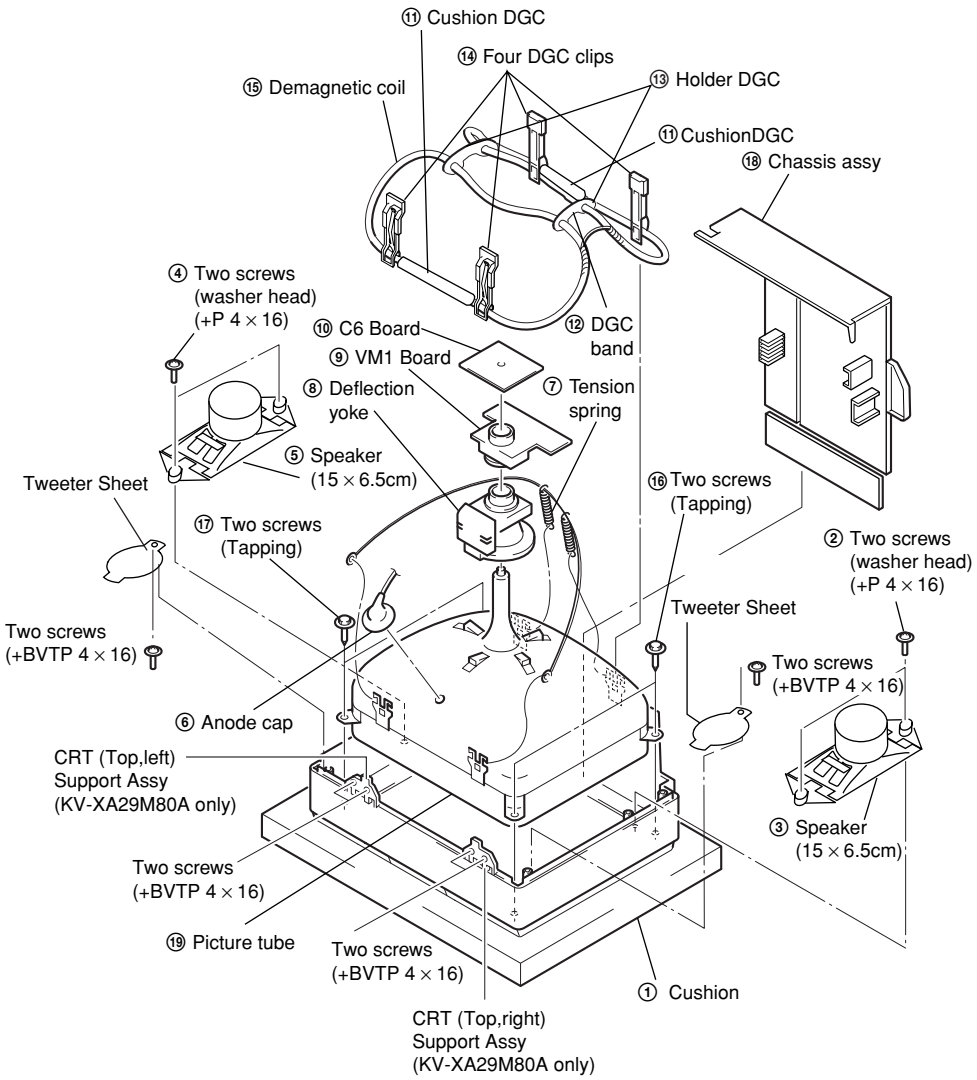
2-8. H BOARD REMOVAL



2-9. A AND B9 BOARDS REMOVAL



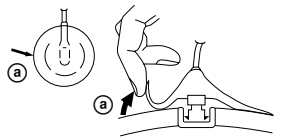
2-10. PICTURE TUBE REMOVAL


⑪ Cushion DGC
⑭ Four DGC clips
⑮ Demagnetic coil
⑬ Holder DGC
⑪ CushionDGC
⑱ Chassis assy
④ Two screws (washer head) (+P 4 × 16)
⑩ C6 Board
⑫ DGC band
⑨ VM1 Board
⑧ Deflection yoke
⑦ Tension spring
⑤ Speaker (15 × 6.5cm)
Tweeter Sheet
⑯ Two screws (Tapping)
⑰ Two screws (Tapping)
② Two screws (washer head) (+P 4 × 16)
Two screws (+BVTP 4 × 16)
Tweeter Sheet
Two screws (+BVTP 4 × 16)
⑥ Anode cap
CRT (Top,left) Support Assy (KV-XA29M80A only)
③ Speaker (15 × 6.5cm)
Two screws (+BVTP 4 × 16)
⑲ Picture tube
Two screws (+BVTP 4 × 16)
① Cushion
CRT (Top,right) Support Assy (KV-XA29M80A only)

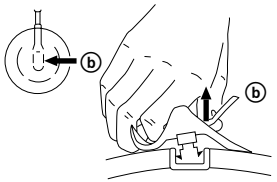
• REMOVAL OF ANODE-CAP

NOTE : After removing the anode, short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT.

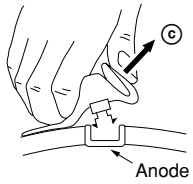
• REMOVING PROCEDURES



① **Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.**



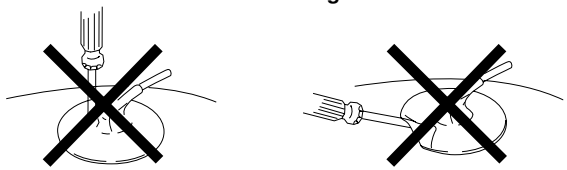
② **Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.**



③ **When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ.**

• HOW TO HANDLE AN ANODE-CAP

① **Do not damage the surface of anode-caps with sharp shaped objects.**
② **Do not press the rubber too hard so as not to damage the inside of anode-cap. A metal fitting called the shatter-hook terminal is built into the rubber.**
③ **Do not turn the foot of rubber over too hard. The shatter-hook terminal will stick out or damage the rubber.**



SECTION 3
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switches should be set as follows unless otherwise noted:

PICTURE control ..... normal
BRIGHTNESS control ..... normal

Perform the adjustments in the following order :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Color-bar/Pattern Generator
2. Degausser
3. Oscilloscope

Preparation :

- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input a white signal with the pattern generator.
   Contrast } normal
   Brightness }
2. Position neck assy as shown in Fig3-2.
3. Set the pattern generator raster signal to a green raster.
4. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side. (See Figures 3-1 through 3-4.)
5. Move the deflection yoke forward and adjust so that the entire screen is green. (See Figure 3-2.)
6. Switch the raster signal to blue, then to red and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws and DY spacers.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Figure 3-5.)

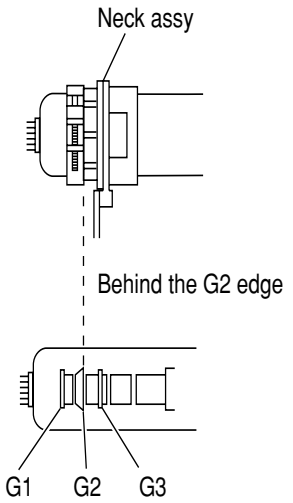


Fig. 3-1

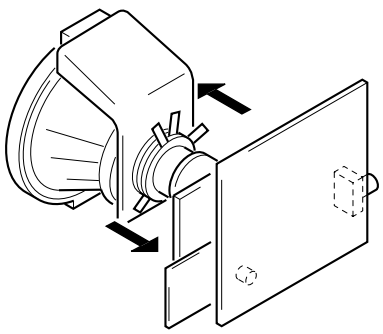


Fig. 3-2

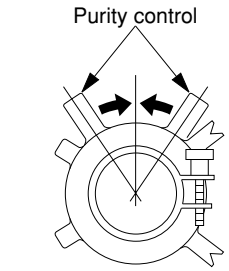


Fig. 3-3

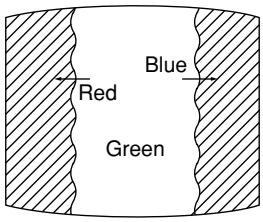


Fig. 3-4

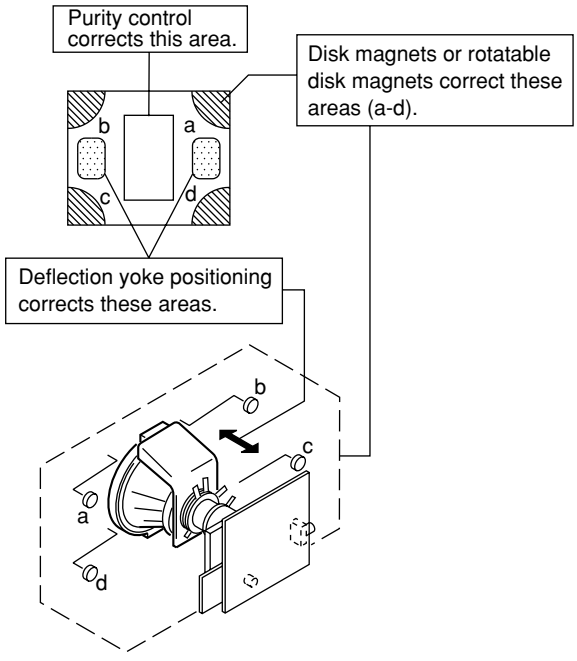


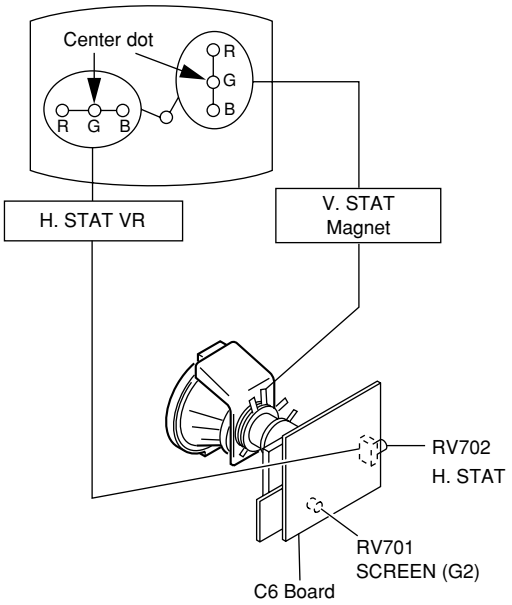
Fig. 3-5

3-2. CONVERGENCE

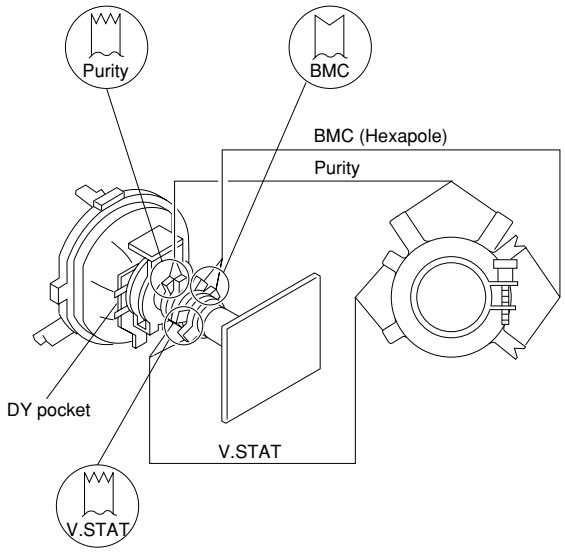
Preparation :

- Before starting this adjustment, adjust the focus, horizontal size and vertical size.
- Receive dot/hatch signal.
- Pic mode: Personal (Pic 90%, Brightness 50%, Col 50%, Hue 50%, Shp 50%)

(1) Horizontal and Vertical Static Convergence

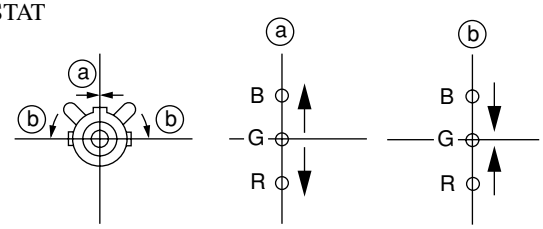


1. (Moving horizontally), adjust the H.STAT control so that the red, green and blue dots are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green and blue dots are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green and blue dots together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other, so be sure to perform adjustments while tracking.)

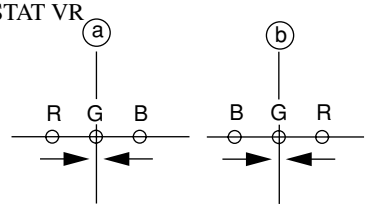


- Operation of V.STAT magnet

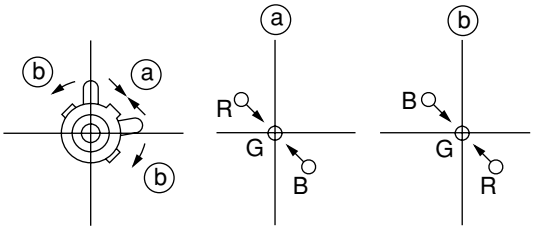
① V. STAT



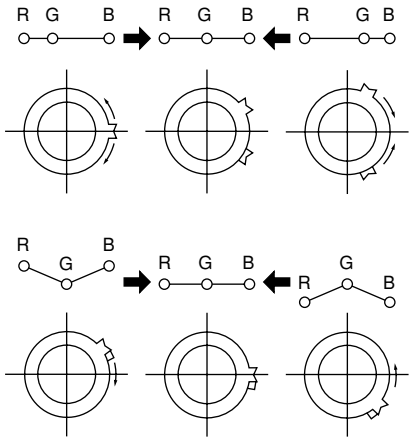
② H. STAT VR



③



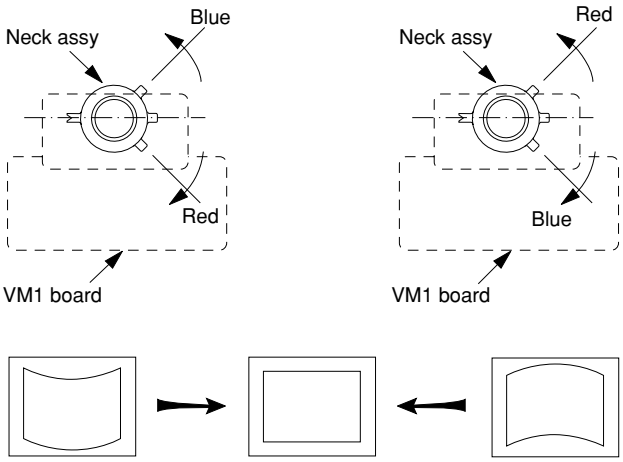
④ BMC (Hexapole) Magnet.
If the red, green and blue dots are not balanced or aligned, then use the BMC magnet to adjust in the manner described below.



⑤ Y separation axis correction magnet adjustment.

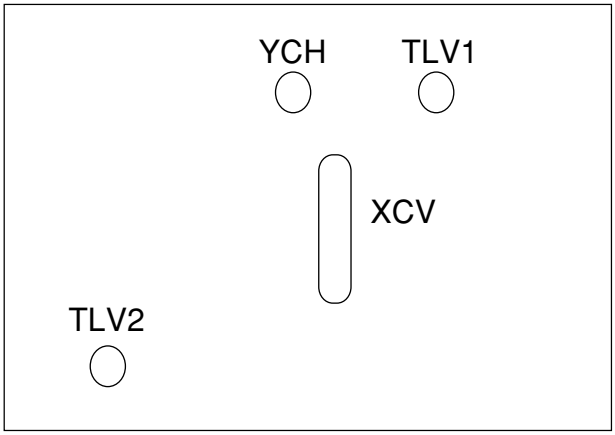
1. Receive the cross-hatch signal and adjust [PICTURE] to [MIN] and [BRIGHTNESS] to [STANDARD] .

2. Adjust the Y separation axis correction magnet on the neck assembly so that the horizontal lines at the top and bottom of the screen are straight.



TLV	Rotate	TLV-2	VOL (29”, 34”) on DY
Rotate	TLV		VOL (25”) on DY
XCV	Rotate	XCV	Adj core on DY
YCH	Rotate	YCH	VOL on DY
TLH	Insert	TLH	Correction Plate to DY Pocket (Left or Right)

ON DY:



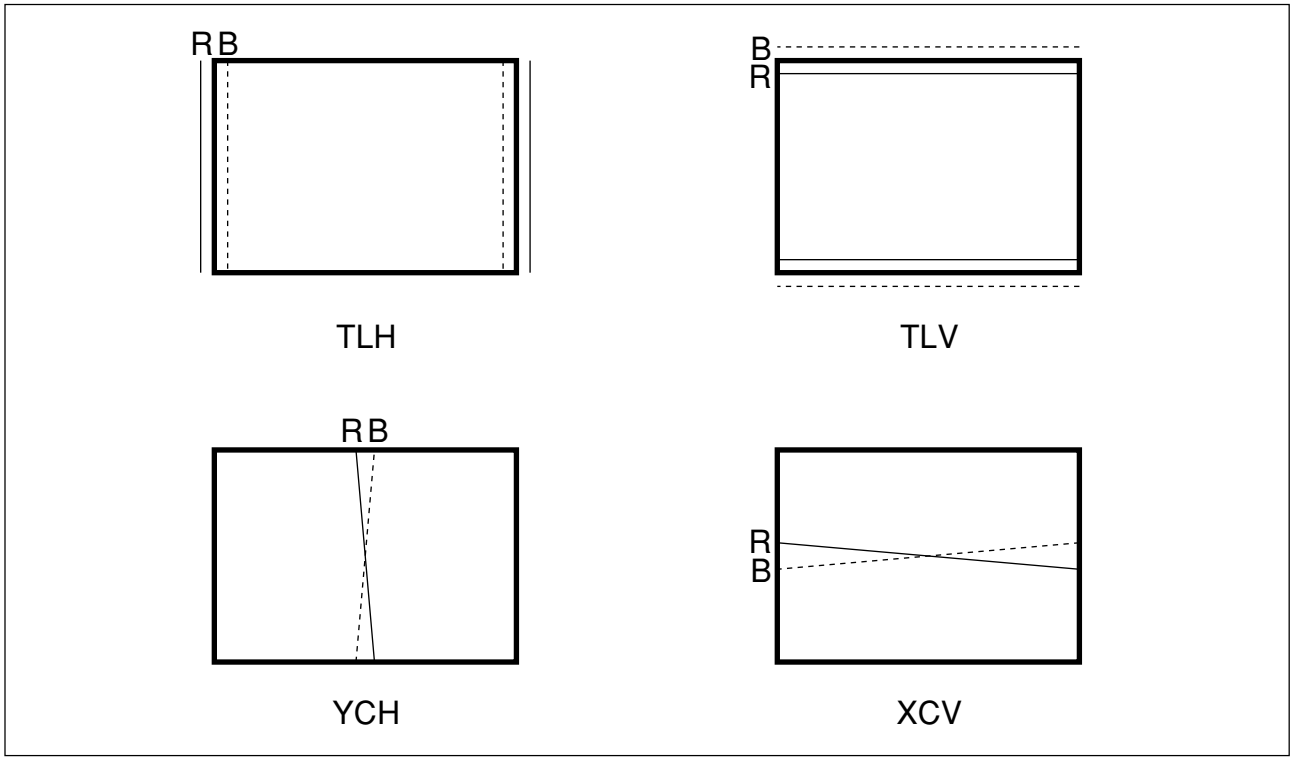
Note

1. The Red and Blue magnets should be equally far from the horizontal center line.
2. Do not separate the Red and Blue magnets too far. (Less than 8 mm)

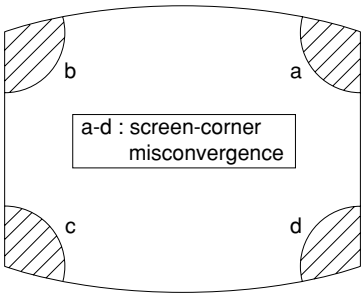
(2) Dynamic Convergence Adjustment

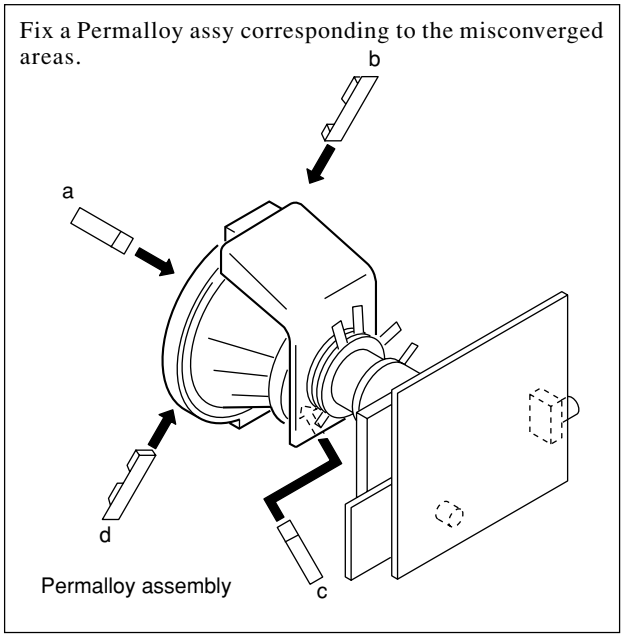
Preparation:

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence



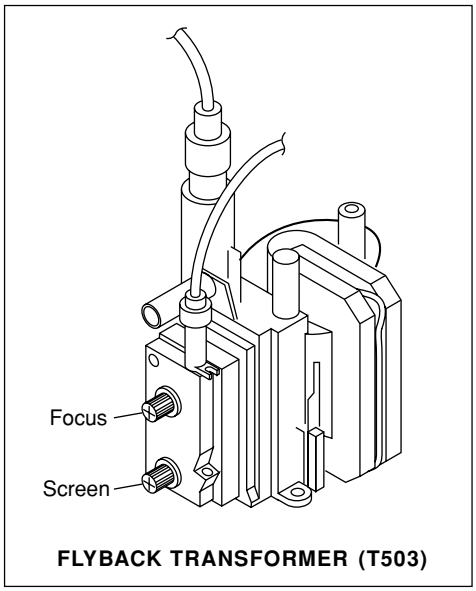
(3) Screen-corner Convergence





3-3. FOCUS ADJUSTMENT

Focus adjustment should be completed before W/B adjustment.



FLYBACK TRANSFORMER (T503)

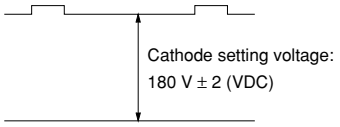
FOCUS ADJUSTMENT

1) Receive digital monoscope pattern.
2) Set "AV CONTROL" to "DYNAMIC"
3) a) Adjust FOCUS VR so that center of the screen becomes just focus.
4) Change the receiving signal to white pattern and blue back.
5) Confirm MAGENTA RING is not noticeable,
   Incase magenta is very obvious, adjust a FOCUS VR to take balance between MAGENTA RING and FOCUS.

3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

1. G2 (SCREEN) ADJUSTMENT

1) Set the PICTURE to normal.
2) Put to VIDEO input mode without signals.
3) Connect R, G and B of the C6 board cathode to the oscilloscope.
4) Adjust BRIGHTNESS to obtain the cathode voltage to the value below.
5) Adjust G2 (screen) on the FBT until picture shows the point before cut off.

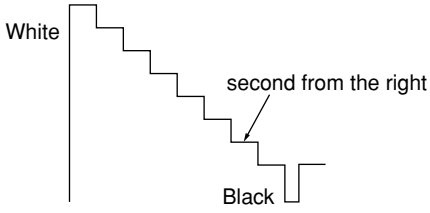


2. WHITE BALANCE ADJUSTMENT

1) Set to Service Mode (Refer Section 4-1: ADJUSTMENTS WITH COMMANDER).
2) Input white raster signal.
3) Set the PICTURE to minimum.
4) Select GCT (WHB 4) and BCT (WHB 5) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
5) Set the PICTURE to maximum.
6) Select GDR (WHB 1) and BDR (WHB 2) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
7) Write into the memory by pressing [MUTING] then [0].

3. SUB BRIGHT ADJUSTMENT

1) Set to service mode.
2) Input a staircase signal of black to white from the pattern generator.
3) BRIGHTNESS .... 50%.
   PICTURE ..... MINIMUM
4) Select SBR (WHB7) with [1] and [4], and adjust SBR (WHB7) level with [3] and [6] so that the second stripe from the right is dimly lit.



SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ADJUSTMENTS WITH COMMANDER

Service adjustments to this model can be performed using the supplied Remote Commander RM-952.

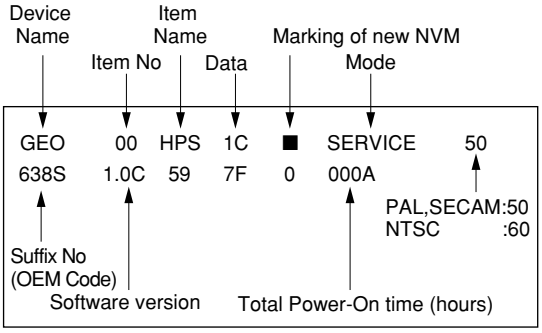
a. ENTERING SERVICE MODE

With the unit on standby

→ [DISPLAY] → [5] → [VOL (+)] → [POWER]

This operation sequence puts the unit into service mode.

The screen display is :



b. METHOD OF CANCELLATION FROM SERVICE MODE

Set the standby condition (Press [POWER] button on the commander), then press [POWER] button again, hereupon it becomes TV mode.

c. METHOD OF WRITE INTO MEMORY

1) Set to Service Mode.
2) Press [1] (UP) and [4] (DOWN), to select the adjustment.
4) Press [MUTING] button to indicate WRITE on the screen.
5) Press [0] button to write into memory.

d. MEMORY WRITE CONFIRMATION METHOD

1) After adjustment, pull out the plug from AC outlet, and then plug into AC outlet again.
2) Turn the power switch ON and set to Service Mode.
3) Call the adjusted items again to confirm adjustments were made.

[1], [4]	Select the adjustment item.
↓	
[3], [6]	Raise/lower the data value.
↓	
[MUTING]	Writes.
↓	
[0]	Executes the writing.

[7], [0]	All the data becomes the values in memory.
[8], [0]	All user control goes to the standard state.
[5], [0]	Service data initialization (Be sure not to use usually.)
[MUTING] + [0]	Write 50Hz adjustment data to 60Hz, or vice versa.
[2], [0]	Copy the data.

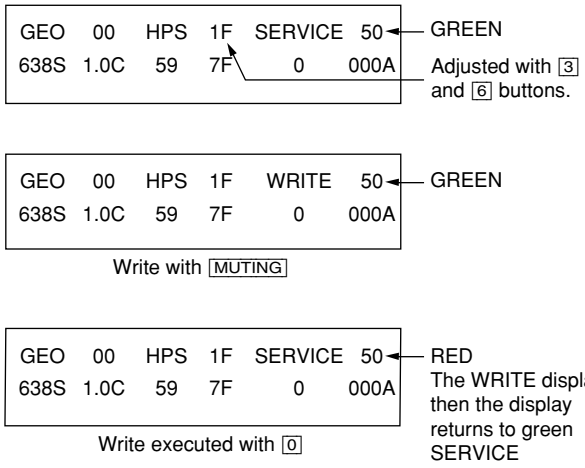
4-2. ADJUSTMENT METHOD

Item Number 00 of device GEO

This explanation uses H-Position as an example.

1. Select "GEO 00 HPS" with the [1] and [4] buttons.
2. Raise/lower the data with the [3] and [6] buttons.
3. Select the optimum state. (The standard is 1F for PAL reception.)
4. Write with the [MUTING] button. (The display changes to WRITE.)
5. Execute the writing with the [0] button. (The WRITE display will be changed to red color while excuting, and back to SERVICE.)

Example on screen display :-


GEO 00 HPS 1F SERVICE 50
638S 1.0C 59 7F 0 000A
GREEN
Adjusted with 3 and 6 buttons.
GEO 00 HPS 1F WRITE 50
638S 1.0C 59 7F 0 000A
GREEN
Write with MUTING
GEO 00 HPS 1F SERVICE 50
638S 1.0C 59 7F 0 000A
RED
The WRITE display then the display returns to green SERVICE
Write executed with 0

Use the same method for all Items. Use [1] and [4] to select the adjustment item, use [3] and [6] to adjust, write with [MUTING], then execute the write with [0].

Note : 1. In [WRITE], the data for all items are written into memory together.
2. For adjustment items that have different standard data between 50Hz or 60Hz, be sure to use the respective input signal after adjustment.

Adjustment Item Table

TVG	Functionality		Initial Data	Data Range	Function	Note for different data	Initial value (detailed)	
Category	No.	Name					25'	29'
GEO	00	HPS	7	3F	H Position	Normal (50/60)/Wide (50/60)	(IE/16)/(1E/16)	(IE/16)/(1E/16)
	01	HSZ	1F	3F	H Size	Normal (50/60)/Wide (50/60)	1F	1F
	02	PAP	1F	3F	Pin Amp	Normal (50/60)/Wide (50/60)	1F	1F
	03	TLT	7	0F	Trapezium	Normal (50/60)/Wide (50/60)	07	07
	04	VPS	1F	3F	V Position	Normal (50/60)/Wide (50/60)	1F	1F
	05	VSZ	1F	3F	V Size	Normal (50/60)/Wide (50/60)	1F	1F
	06	SCO	7	0F	S Correction	Normal (50/60)/Wide (50/60)	07	07
	07	VLN	7	0F	V Linearity	Normal (50/60)/Wide (50/60)	07	07
	08	BOW	7	0F	AFC Bow	Normal (50/60)/Wide (50/60)	07	07
	09	AGL	7	0F	AFC Angle	Normal (50/60)/Wide (50/60)	07	07
	0A	UPN	1F	3F	Upper Pin	Normal (50/60)/Wide (50/60)	1F	1F
	0B	LPN	1F	3F	Lower Pin	Normal (50/60)/Wide (50/60)	1F	1F
	0C	HBL	0	1	H Blanking on/off		01	01
	0D	LBL	2	0F	Left H Blanking	Normal (50/60)/Wide (50/60)	(0F/0F)/(0F/0F)	(0F/0B)/(0F/0B)
	0E	RBL	0B	0F	Right H Blanking	Normal (50/60)/Wide (50/60)	(00/00)/(00/00)	(02/02)/(02/02)
WHB	00	RDR	25	3F	R Drive	DYNAMIC/others	25/2A	25/2A
	01	GDR	25	3F	G Drive	DYNAMIC/others	1F	1F
	02	BDR	25	3F	B Drive	DYNAMIC/others	1F	1F
	03	RCT	0A	0F	R Cutoff	SECAM/others	07	07
	04	GCT	7	0F	G Cutoff	SECAM/others	07	07
	05	BCT	7	0F	B Cutoff	SECAM/others	07	07
	06	BMN	15	1F	Brightness Minimum Data		15	15
	07	SBR	1F	3F	Sub Brightness Control		25	25
	08	APB	2	3	Sub Bright Ctl SW for PNC #3		02	02
SAJ	00	PMX	33	3F	Picture Maximum Data	Non-Wide/Wide	33/2E	36/33
	01	SHU	8	0F	Sub Hue Control	TV/Video	08	08
	02	SSH	3	0F	Sub Sharpness Control	TV/Video	05/09	05/09
	03	SCL	1F	3F	Sub Color Control	(NTSC/others)/Wide (NTSC/others)	1F	1F
VP	00	EHT	4	0F	EHT Comp	Normal (50/60)/Wide (50/60)	(02/02)/(02/02)	(05/05)/(05/05)
	01	GMA	2	03	Gamma Correction	NON-STD. (NTSC/others)/STD.(NTSC/others)	(02/02)/(01/01)	(02/02)/(01/01)
	02	APG	0	1	Gamma Ctl SW for PNC #3	NON-STD. (NTSC/others)/STD.(NTSC/others)	00	00
	03	YDL	6	0F	Y Delay	PAL/SECAM/NTSC/DVD	06/09/08/08	06/09/08/08
	04	SST	1	03	SECAM ID Start Position	SECAM/PAL	01/01	01/01
	05	SSP	1	03	SECAM ID Stop Position	SECAM/PAL	01/01	01/01
	06	RLM	0	3	RGB Limit		02	00
	07	SLV	2	03	SECAM ID Level	SECAM/PAL	02/02	02/02
	08	SBF	22	3F	SECAM BELL fO	SECAM/PAL	22/22	22/22
	09	DYC	1	1	Dynamic Color on/off		01	01
	0A	ABL	1	1	ABL Mode Switching	STANDARD Always 0	01	01
	0B	VTH	1	1	ABL Detection Vth Switching		01	01
	0C	SF0	1	1	FO Switching for Sharpness	NTSC/Others	01/01	01/01
	0D	DCX	1	1	DC Trans. Ratio Switching		01	01
	0E	SHT	1	1	Pre-/Overshoot ratio Switch	NTSC/Others	01/01	01/01
	0F	HDW	0	1	H Drive Pulse Width Switch		00	00

Adjustment Item Table

TVG	Functionality		Initial Data	Data Range	Function	Note for different data	Initial value (detailed)	
Category	No.	Name					25'	29'
VP	10	AFC	1	03	AFC Gain Control	TV/Video/Text	01/00/01	01/00/01
	11	HOS	7	0f	H Oscillation		07	07
	12	HSS	0	1	Slice Level of H Sync Sep.		00	00
	13	VSS	0	1	Slice Level of V Sync Sep.		00	00
	14	HMS	1	1	Macro Vision C/m off/on	Normal(50-60)/Wide (50/60)	(01/01)/(01/01)	(01/01)/(01/01
	15	YUV	0	1	YUV Swicth Control		01	01
	16	CDV	1	3	CD mode for Video	Video only	01	01
	17	RON	1	1	R ON	not memorized	01	01
	18	GON	1	1	G ON	not memorized	01	01
	19	BON	1	1	B ON	not memorized	01	01
	1A	PON	1	1	P ON	not memorized	01	01
	1B	AXN	1	1	AXIS SW	(NTSC/Others)/Wide (NTSC/Others)(Only Dyna)	(01/01)/(01/01)	(01/01)/(01/01)
	1C	RSL	0	1	RGB SEL		00	00
	1D	VBW	1	3	VBLKW		00	00
	1E	RFP	0	1	REFP		00	00
	1F	JMP	0	1	Jump		00	00
	20	VMC	2	3	VM off		03	03
AP	00	INF	5	3F	Input Attenuation When surround off		05	05
	01	INS	0A	3F	Input Attenuation When surround on (xg-only)		0A	0A
	02	SEF	0	0F	Surround Effect Control (XA-ONLY)		00	00
	03	PH1	3	3	Phase 1 Register Selection		03	03
	04	PH2	0	3	Phase 2 Register Selection (XG-ONLY)		00	00
	05	PH3	0	3	Phase 3 Register Selection (XG-ONLY)		00	00
	06	PH4	0	3	Phase 4 Register Selection (XG-ONLY)		00	00
	07	BCS	2	3	Bass Center Shift		01	01
	08	TCS	2	3	Treble Center Shift		02	02
	09	TRF	2	3	RF Treble Offset		02	02
MSP	00	WST	15	FF	W/G Stereo Threshold		15	15
	01	WBT	EA	FF	W/G Bilingual Threshold		EC	EC
	02	WLL	5	FF	W/G Monaural Threshold		05	05
	03	WAC	0	0F	W/G Agreement Count		01	01
	04	WDL	30	FF	W/G Search Delay		30	30
	05	NDL	20	FF	NICAM Search Delay		20	20
	06	SDL	10	FF	Stereo status Read Delay		10	10
	07	AGC	1	1	AGC Switch Auto/Constant		01	01
	08	REL	28	3F	AGC Gain at Constant Mode		28	28
	09	CRM	0	1	Carrier muting on/off		00	00
	0A	ACO	1	1	Audio Clock out on/off		01	01
	0B	FP	1B	7F	FM Prescale for non-M system		1B	1B
	0C	FPM	32	7F	FM Prescale for M system		32	32
	0D	FH	36	7F	FM Prescale for HDEV		36	36
	0E	FHM	65	7F	FM Prescale for HDEV and M		65	65
	0F	WGP	2A	7F	W/G Prescale		1C	1C
	10	NIP	6D	7F	NICAM Prescale		7F	7F
	11	ERR	50	FF	Auto FM switch Threshold		50	50
	12	VOL	6D	FF	Speaker Gain 7000h to 7ff0h		6D	6D

Adjustment Item Table

TVG	Functionality		Initial Data	Data Range	Function	Note for different data	Initial value (detailed)	
Category	No.	Name					25'	29'
TXT	00	TXH	0	3	Teletext Horizontal Position		00	00
	01	TXV	0	3	Teletext Vertical Position		00	00
OPM	00	OSH	0A	3F	OSD H Position	Option - Misc	0F	0F
	01	COM	1	03	Comb Selection		02	02
	02	APC	1	1	APC Switch		01	01
	03	TSY	0	03	TV Sys at Auto TV Sys		00	00
	04	MUT	0	1	No Signal Mute		00	00
	05	AFM	0	1	Auto FM switch		01	01
	06	RFB	0	3	C-BPF Control		00	00
	07	TVO	0	7	Tilt to V-Angle offset		02	02
	08	DBL	0	1	Disable Blueback Function		00	00
	09	SCH	1	7F	CH Selection for Shipping Condition	NTSC Models only	00	00
	0A	SCA	1	1	Cable/Air selection for shipping condition	NTSC Models only	00	00
OPB	00	OP1	FF	FF	Optional Bits 1 (see specified pages)	Option - Bits	EF	EF
	01	OP2	62	FF	Optional Bits 2 (see specified pages)		06	06
	02	OP3	B1	FF	Optional Bits 3 (see specified pages)		A1	A1
	03	OP4	02	FF	Optional Bits 4 (see specified pages)		02	02

NOTE

- shaded items are fixed data.
- Standard data listed on the Adjustment Item Table are reference values, therefore it may be different for each model and for each mode.
- Note for Different Data — Those are the standard data values written on the microprocessor. Therefore, the data values of the modes and stored respectively in the memory.
  In case of a device replacement, adjustment by rewriting the data value is necessary for some items.

OPTION NOTE

OP1

Item	XTAL 4.43	XTAL 3.58	SECAM	2nd. Lang	B/G	I	D/K	M
KV-XA25M80A	1	1	1	0	1	1	1	1
KV-XA29M80A	1	1	1	0	1	1	1	1

NOTE: When Bit 7, 6 & 5 = 000, Only PAL color system is selected.
When Bit 7 is selected, Auto, PAL & NTSC 4.43 Color system is enable.
When Option is single color system, Color system cannot be changed & "AUTO" will not be displayed.

OP2

Item	TOP	NICAM	HDEV	Thai Bil	Dis Fav.	DVD Input	AV Input	
KV-XA25M80A	0	0	0	0	0	1	1	0
KV-XA29M80A	0	0	0	0	0	1	1	0

AV Input 00 = no AV Input 01 = 1 AV Input
10/11 = 2 AV Input
DVD Input Effective only when "AV Input" is set to 2 AV Input
Dis Fav. Disable Favorite Channel (Only Effective For 21" & 14" Models Only)

OP3

Item	PIC Rot*1	2199 Curve*1	Auto PIC	A-TV sys	US ST	AV Mono*1	11 KEY	Color SW*2&*1
KV-XA25M80A	1	0	1	0	0	0	0	1
KV-XA29M80A	1	0	1	0	0	0	0	1

PIC Rot*1 PIC Rotation Feature Switch 0 = disabled, 1 = enabled
2199 Curve*1 2199 Volume Curve Selection 0 = Others, 1 = 2199 Volume Curve.
Auto PIC Auto Picture Improvement 0 = inactive, 1 = active
A-TV sys Auto TV System in Auto Program 0 = disabled, 1 = enabled
US ST USA Stereo 0 = disabled, 1 = enabled
AV MONO*1 AV Mono models 0 = Stereo, 1 = Mono
(No Balance & Surround selection)
11 Key Front Key Selection 0 = 7 key model, 1 = 11 key model
Color SW*2&*1 Color Data Selection in Dynamic Mode 0 = 65 (No PIP), 1 = 57 (PIP)

Note: *1 - For XA-21/XG25 Models Only
*2 - For XA-34/29/25 Models Only

OP4

Item	(unused)	(unused)	(unused)	(unused)	(unused)	Vid NTSC 3.58	AP_XG*1	(unused)
KV-XA25M80A	0	0	0	0	0	0	1	0
KV-XA29M80A	0	0	0	0	0	0	1	0

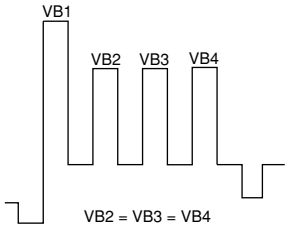
AP_XG*1 To select the XG AP (board B6) 0: No; 1 = Yes

Note: *1 - For XA-21/XG25 Models Only

4-3. PICTURE QUALITY ADJUSTMENTS

SUB COLOR ADJUSTMENT

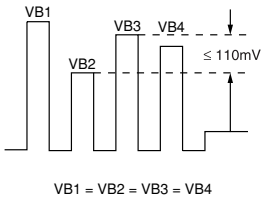
1. Input a PAL color-bar.
2. Set to the following condition:
   PICTURE 100%, BRIGHTNESS 50%, COLOR 50%
3. Connect an oscilloscope to pin ① (B OUT) of CN305, A board.
4. Set to Service Mode and select SAJ 03 'SCL' with [1] and [4] of the commander then adjust to VB2=VB3=VB4 with [3] and [6].
5. Press [MUTING] → [0] of the commander to write the data.
6. Adjust SAJ 03 'SCL' as step 2 to 5 when receiving NTSC color-bar.



VB2 = VB3 = VB4 (Difference is within 70mV)

SUB HUE ADJUSTMENT

1. Select Video.
2. Input a NTSC, color-bar, into Video.
3. Set the following condition:
   PICTURE 100%, BRIGHTNESS 50%, COLOR 50%
4. Connect an oscilloscope to pin ① (B OUT) of CN305, A board.
5. Select SAJ 01 'SHU' with [1] and [4] of the commander by setting to Service Mode and adjust to VB1=VB2=VB3=VB4 with [3] and [6].



The highest level of VB1,VB2,VB3,VB4 must be aligned at the same line. Ideal difference level between VB2 and VB3 should be within ± 110mV.

6. Press [MUTING] → [0] of the commander to write the data.

4-4. DEFLECTION ADJUSTMENT

NORMAL MODE (50Hz)

1. Set to Service Mode.
2. Using the [1] and [4] button, select category GEO (Service Mode).
3. Raise/lower the data using the [3] and [6] buttons.
   Select and adjust the following items to obtain optimum image.

Service Item

GEO :	00	HPS	H POSITION
	01	HSZ	H SIZE
	02	PAP	PIN AMP
	03	TLT	TILT
	04	VPS	V POSITION
	05	VSZ	V SIZE
	06	SCO	S CORRECTION
	07	VLN	V LINEARITY
	08	BOW	AFC BOW
	09	AGL	AFC ANGLE
	0A	UPN	UPPER CORNER PIN
	0B	LPN	LOWER CORNER PIN

WIDE MODE (50Hz)

4. Input PAL color bar.
5. Adjust condition change to WIDE MODE : ON.
6. Using the [1] and [3] button, select category GEO (Service Mode).
7. Copy (item from normal mode (50Hz)) adjusted data for the following item:

Service Item

GEO :	01	HSZ	H POSITION
	05	VSZ	V POSITION
	06	SCO	S CORRECTION
	07	VLN	V LINEARITY

8. Raise/lower data using [3] and [6] buttons, select and adjust the following items to obtain optimum image.

Service Item

GEO :	00	HPS	H POSITION
	02	PAP	PIN AMP
	03	TLT	TILT
	04	VPS	V POSITION
	08	BOW	AFC BOW
	09	AGL	AFC ANGLE
	0A	UPN	UPPER CORNER PIN
	0B	LPN	LOWER CORNER PIN

9. After confirm WIDE MODE : ON – OFF.
10. Repeat same steps for NTSC input signal.

NORMAL MODE (60Hz)

11. Input 525/60Hz signal.
12. Using the [1] and [4] buttons select category GEO (Service Mode).
13. Select and adjust the following items to obtain obtimum image.
    Raise/lower the data with the [3] and [6] buttons.

Service Item

GEO :	00	HPS	H POSITION
	01	HSZ	H SIZE
	02	PAP	PIN AMP
	03	TLT	TILT
	04	VPS	V POSITION
	05	VSZ	V SIZE
	06	SCO	S CORRECTION
	07	VLN	V LINEARITY
	08	BOW	AFC BOW
	09	AGL	AFC ANGLE
	0A	UPN	UPPER CORNER PIN
	0B	LPN	LOWER CORNER PIN

WIDE MODE (60Hz)

14. Input monoscope signal.
15. Adjust condition change to WIDE MODE: ON.
16. Using the [1] and [4] button select category GEO (Service Mode).

17. Copy (item from NORMAL MODE (60Hz)) adjusted data for the following items:

Service Item

GEO :	01	HSZ	H SIZE
	05	VSZ	V SIZE
	06	SCO	S CORRECTION
	07	VLN	V LINEARITY

18. Raise/lower the data with the [3] and [6] buttons. Select and adjust the following items to obtain optimum image.

Service Item

GEO :	00	HPS	H POSITION
	02	PAP	PIN AMP
	03	TLT	TILT
	04	VPS	V POSITION
	08	BOW	AFC BOW
	09	AGL	AFC ANGLE
	0A	UPN	UPPER CORNER PIN
	0B	LPN	LOWER CORNER PIN

19. After confirm WIDE MODE : ON – OFF.

Note:
For Deflection Adjustment, set PICTURE MODE to "SOFT".

4-5. H-TRAPEZOID ADJUSTMENT

1. Receive cross hatch/dot signal.

2. Adjust RV1801 on C6 board to make H-trapezoid distortion best.

4-6. A BOARD ADJUSTMENT AFTER IC003 (MEMORY) REPLACEMENT

1. Enter to Service Mode.

2. Press commander buttons [5] and [0] (Data Initialize), and [2] and [0] (Data Copy) to initialize the data.

3. Call each item number and check if the respective screen shows the normal picture.
In cases where items are not well adjusted, rectify the items with fine adjustment.
Write the data per each item number ([MUTING] + [0]).

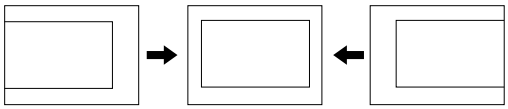
4. Select item numbers “OPB0” (OP1), “OPB1” (OP2), “OPB2” (OP3), “OPB3” (OP4) and respectively set the bit per model with command buttons [3] and [6].

5. Press commander buttons [8] and [0] (Test Normal) to return to the data that was set on the shipment from the factory. (This will also cancel Service Mode.)

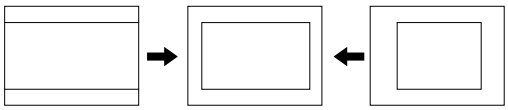
4-7. PICTURE DISTORTION ADJUSTMENT (1)

Item Number 00 – 0B

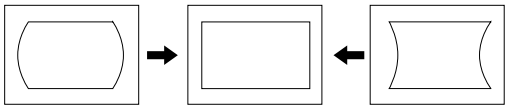
GEO 0 HPS (H POSITION)



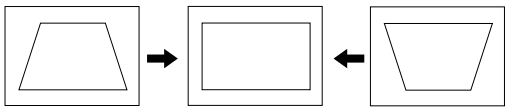
GEO 1 HSZ (H SIZE)



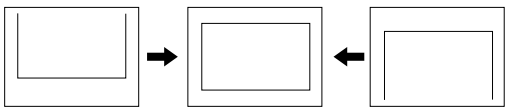
GEO 2 PAP (PIN AMP)



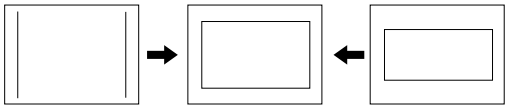
GEO 3 TLT (TRAPEZIUM)



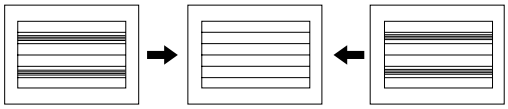
GEO 4 VPS (V POSITION)



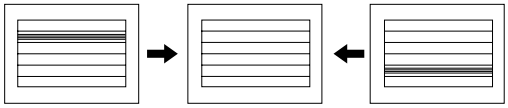
GEO 5 VSZ (V SIZE)



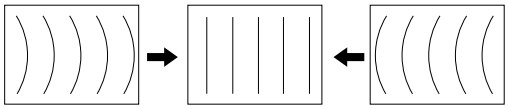
GEO 6 SCO (VERTICAL S-Correction)



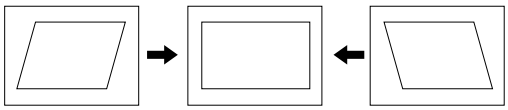
GEO 7 VLN (V LINEARITY)



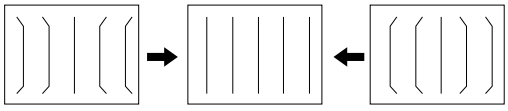
GEO 8 BOW (AFC.BOW)



GEO 9 AGL (AFC.ANGLE)

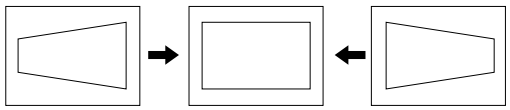


GEO 0A UPN (UPPER CORNER PIN)
GEO 0B LPN (LOWER CORNER PIN)



PICTURE DISTORTION ADJUSTMENT (2)

H-TRAPEZOID (Rotate RV1801)



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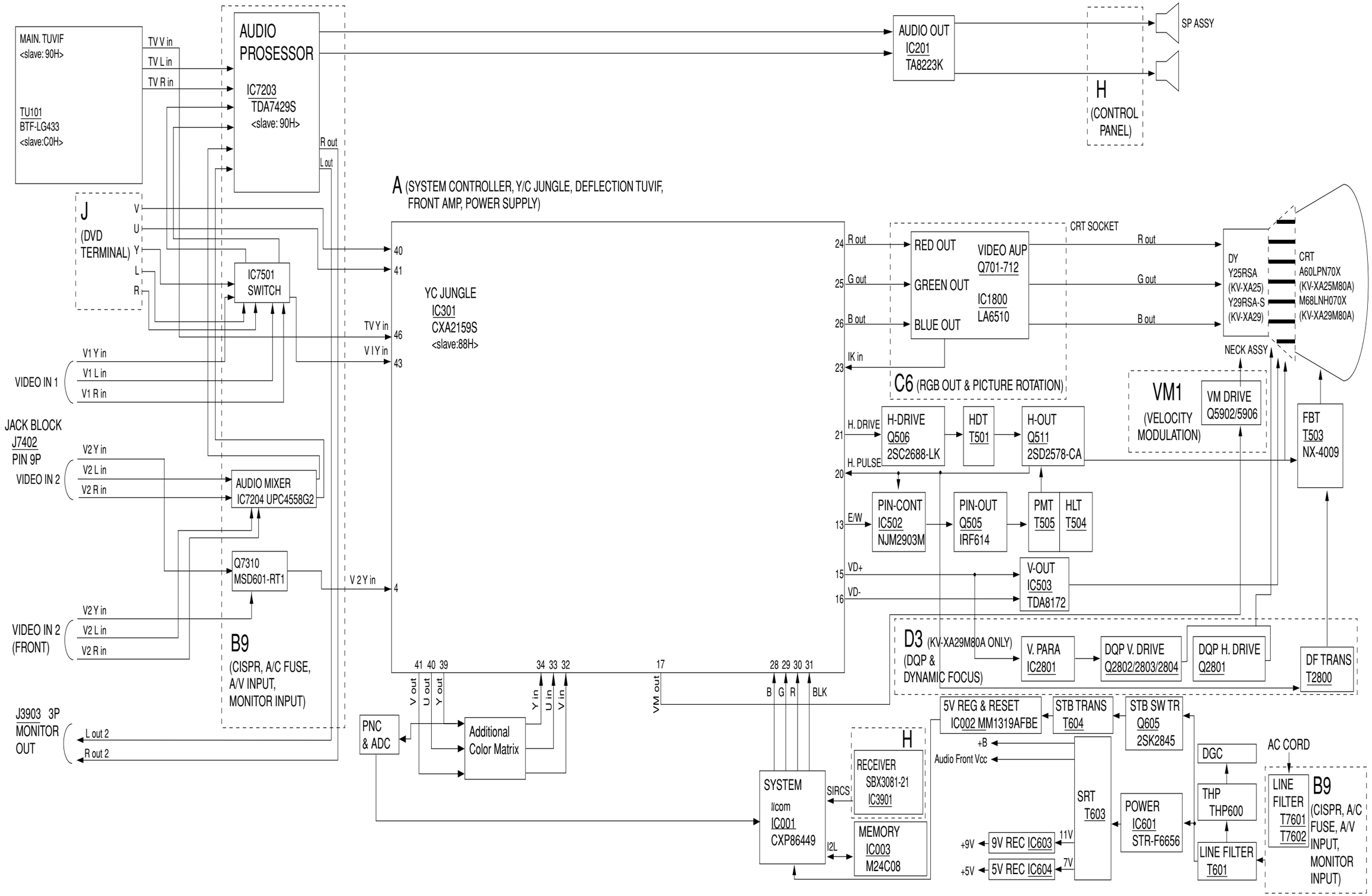
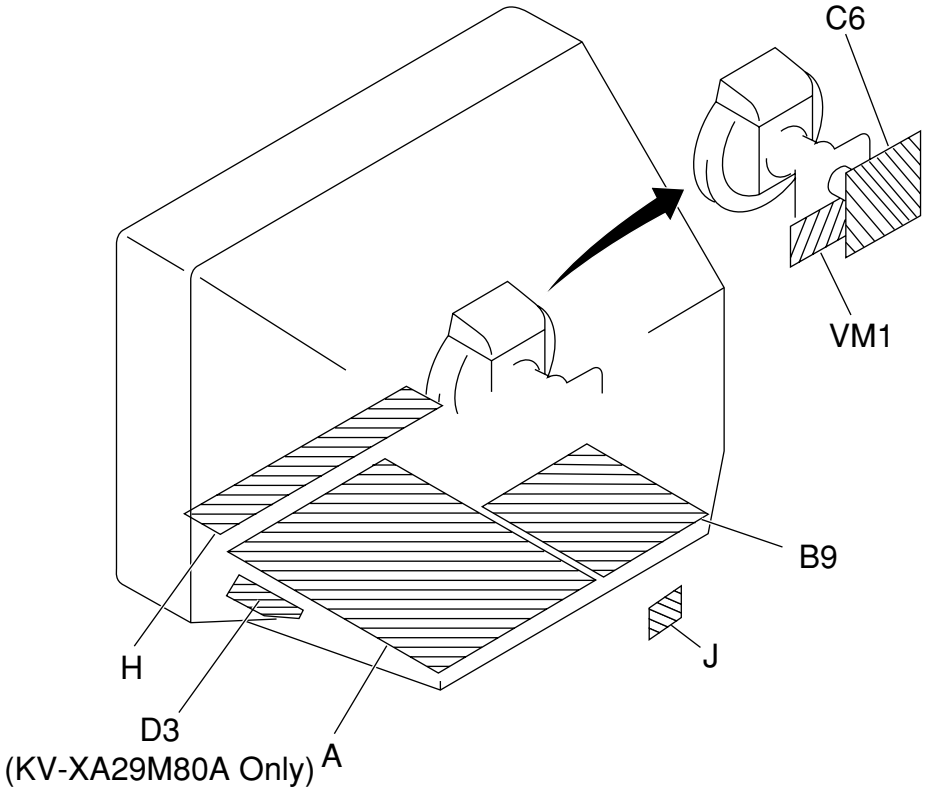
SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAM



5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAM

Note:

- All capacitors are in µF unless otherwise noted.
- All electrolytic capacitors are rated at 50V unless otherwise noted.
- All resistors are in ohms.
  kΩ = 1000Ω, MΩ = 1000kΩ
- Indication of resistance which does not have rating electrical power is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4W (CHIP: 1/10W)

- : nonflammable resistor.
- △ : internal component.
- : panel designation or adjustment for rrepair.
- All variable and adjustable resistors have characteristic curve B unless otherwise noted.
- **Redings are taken with a color-bar signal input.**
  no mark : COMMON
  ( ) : PAL
  [ ] : NTSC 3.58
- **Readings are taken with a 10Ω digital multimeter.**
- **Voltage are dc with respect to ground unless otherwise noted.**
- **Voltage variations may be noted due to normal production tolerances.**
- **All voltage are in V.**
- **✻ : Cannot be measured.**
- **Circled numbers are waveform references.**
- **: B +bus.**
- **: B –bus.**
- **: signal path.**

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ✻	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The component identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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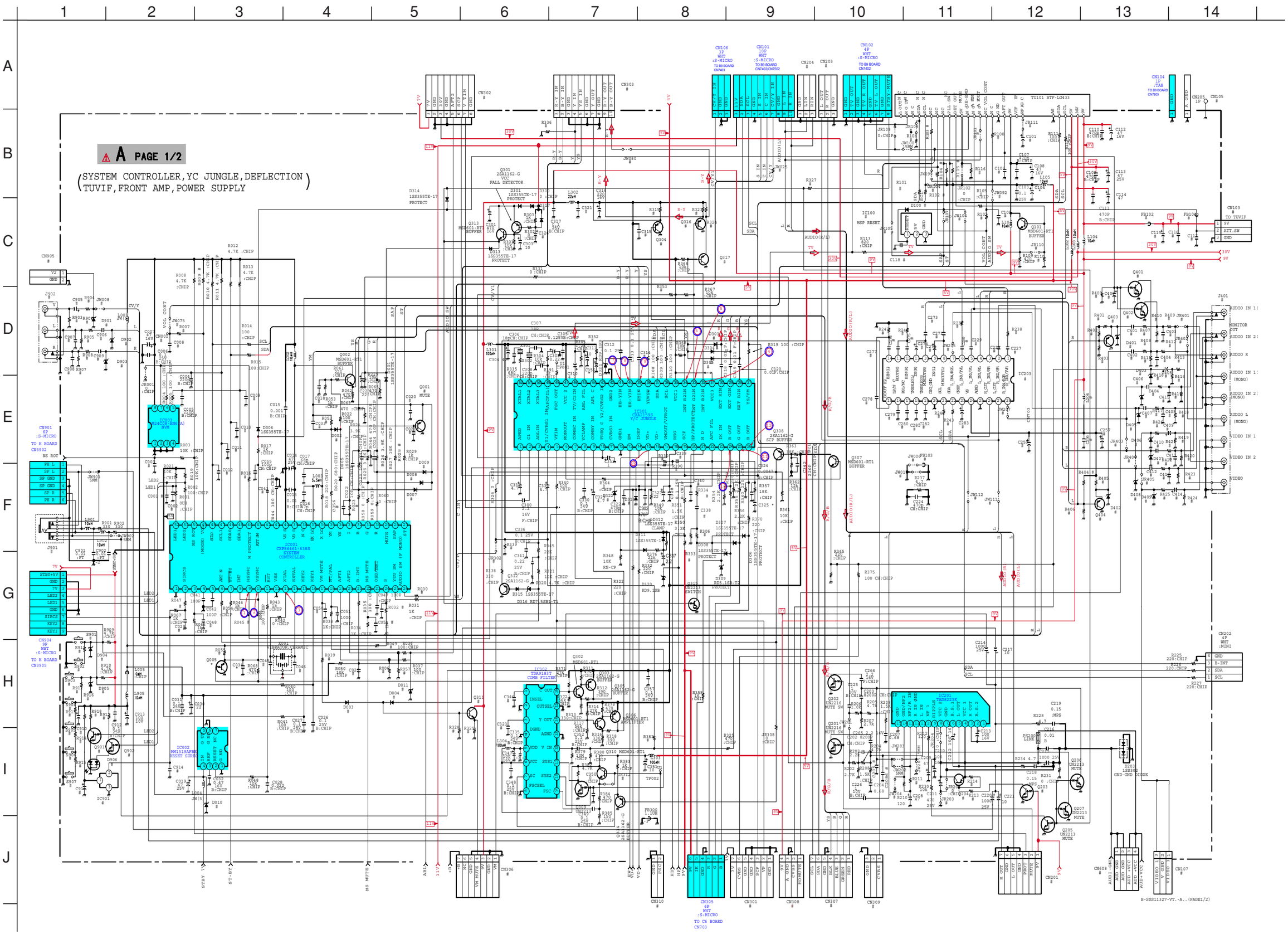
(1) A Board Schematic Diagram



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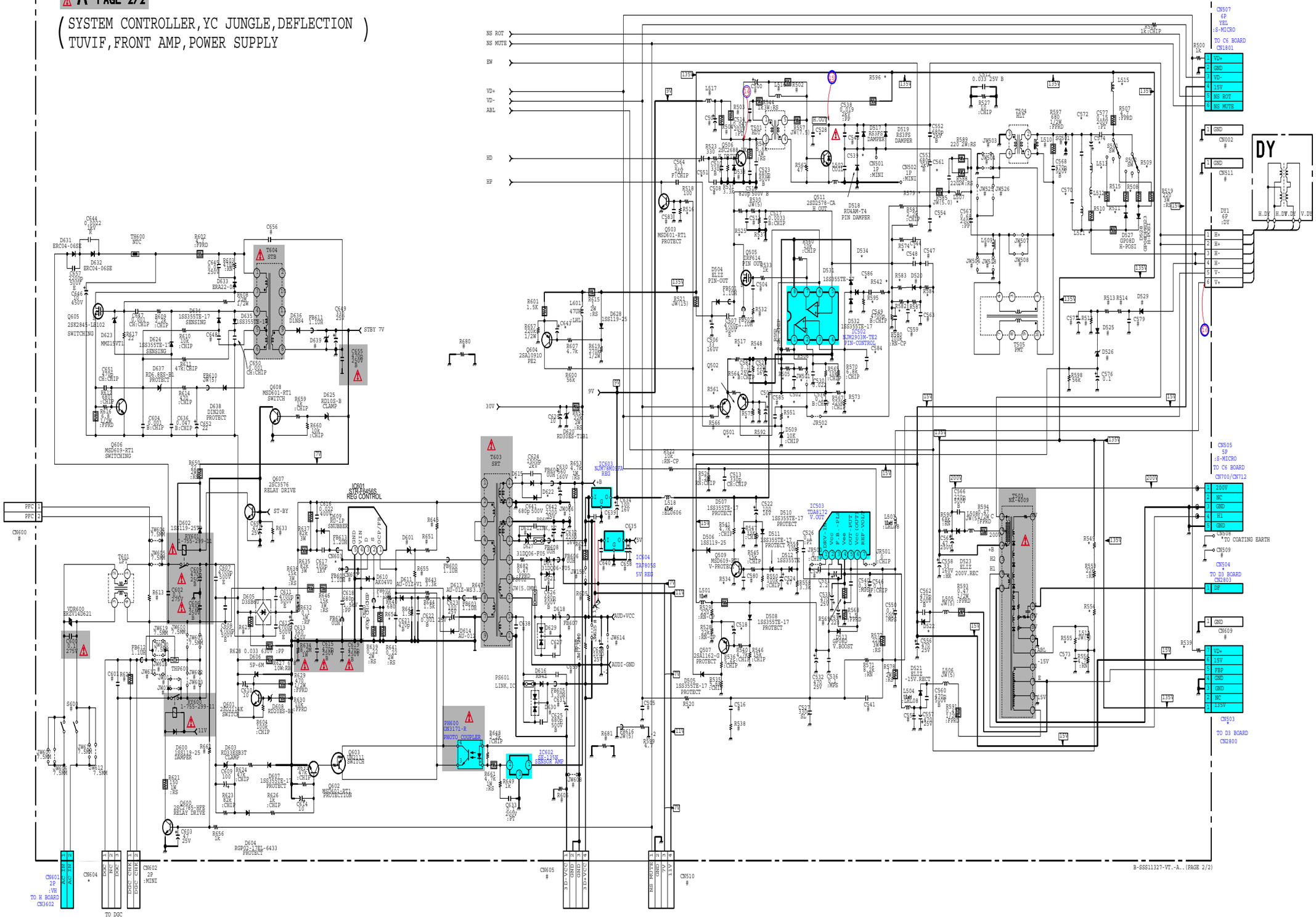
1 2 3 4 5 6 7 8 9 10 11 12 13 14

A B C D E F G H I J

⚠ A PAGE 2/2

(SYSTEM CONTROLLER,YC JUNGLE,DEFLECTION
TUVIF,FRONT AMP,POWER SUPPLY)



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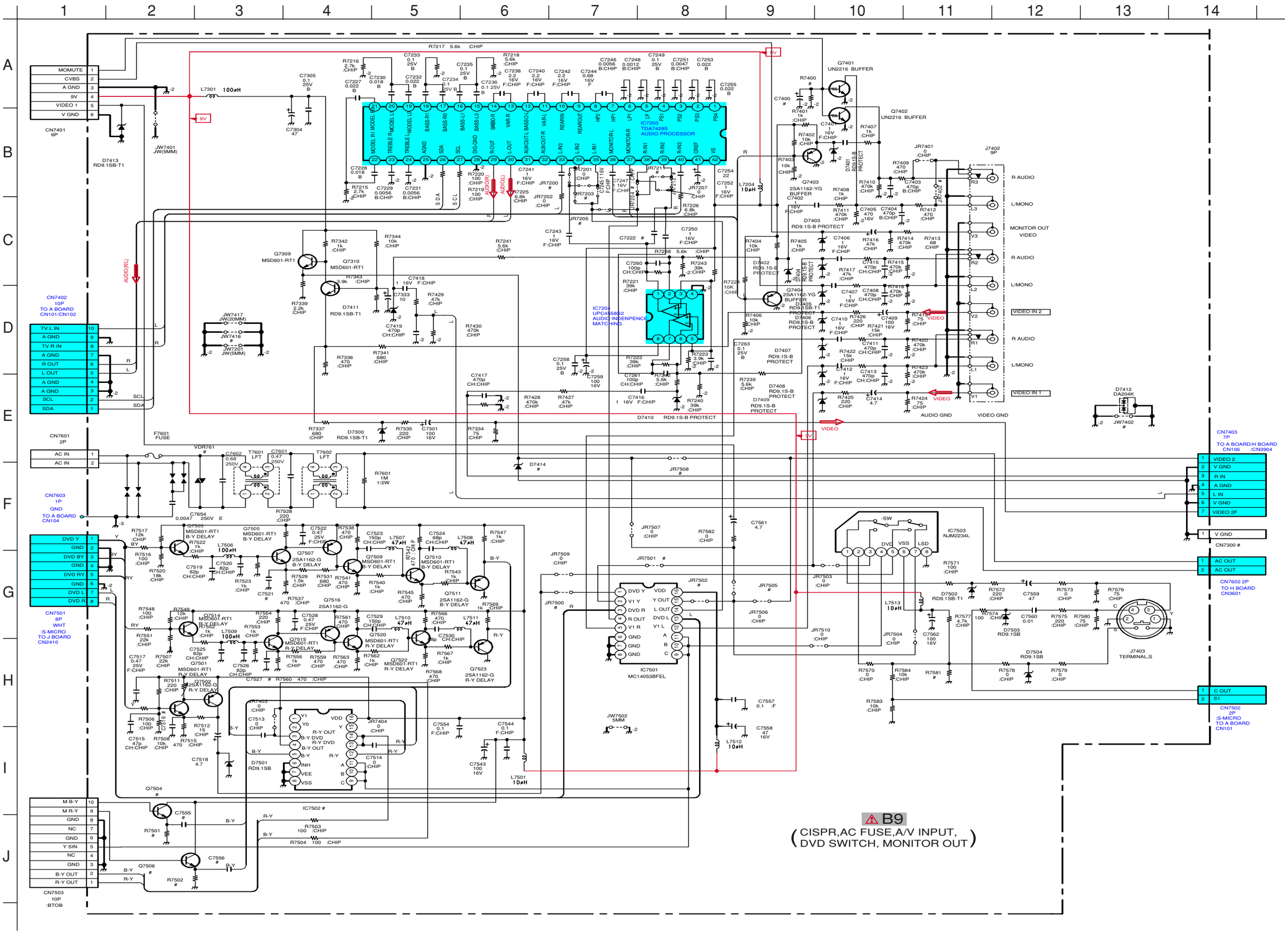
(2) B9 Board Schematic Diagram



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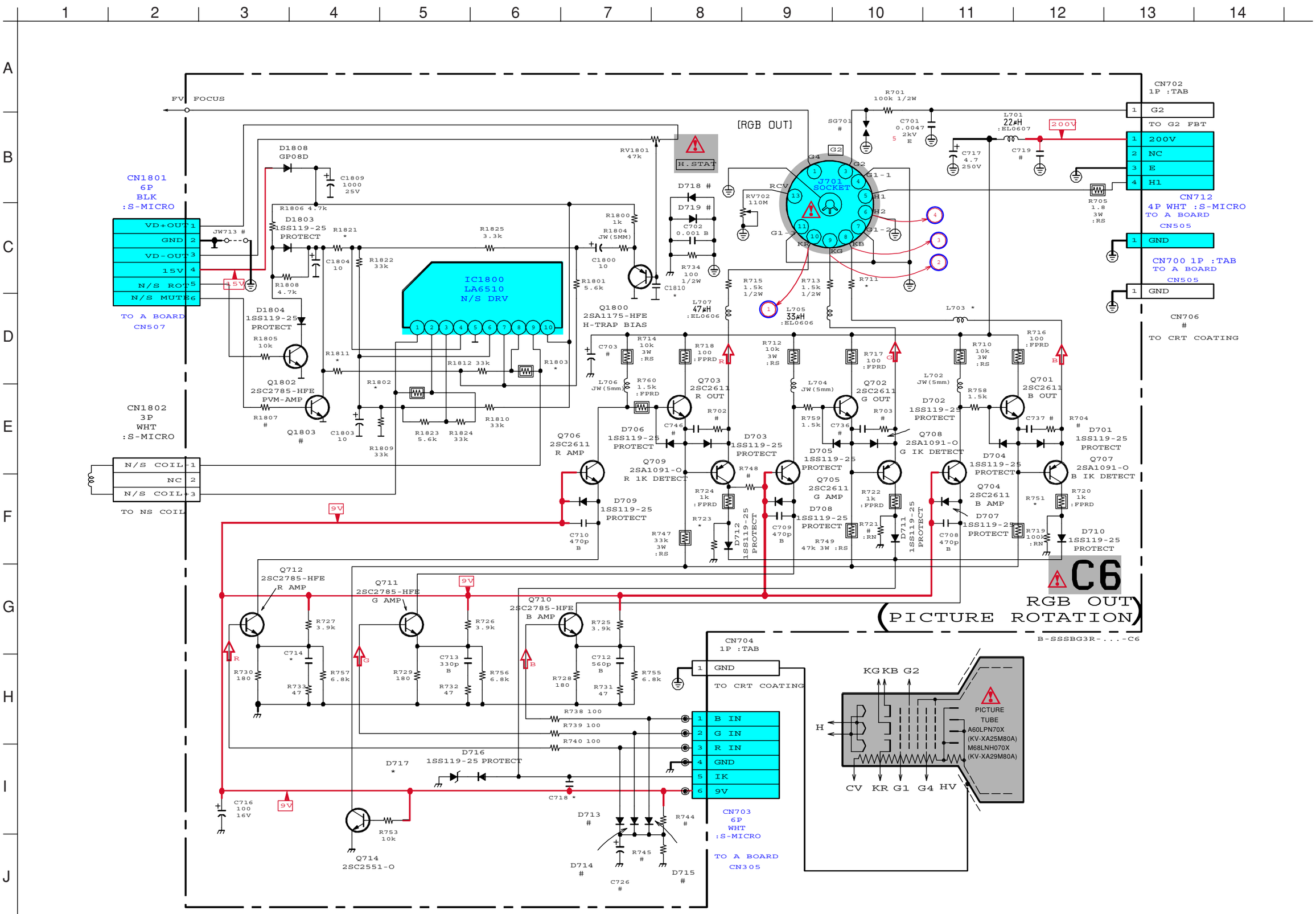
(3) C6 Board Schematic Diagram



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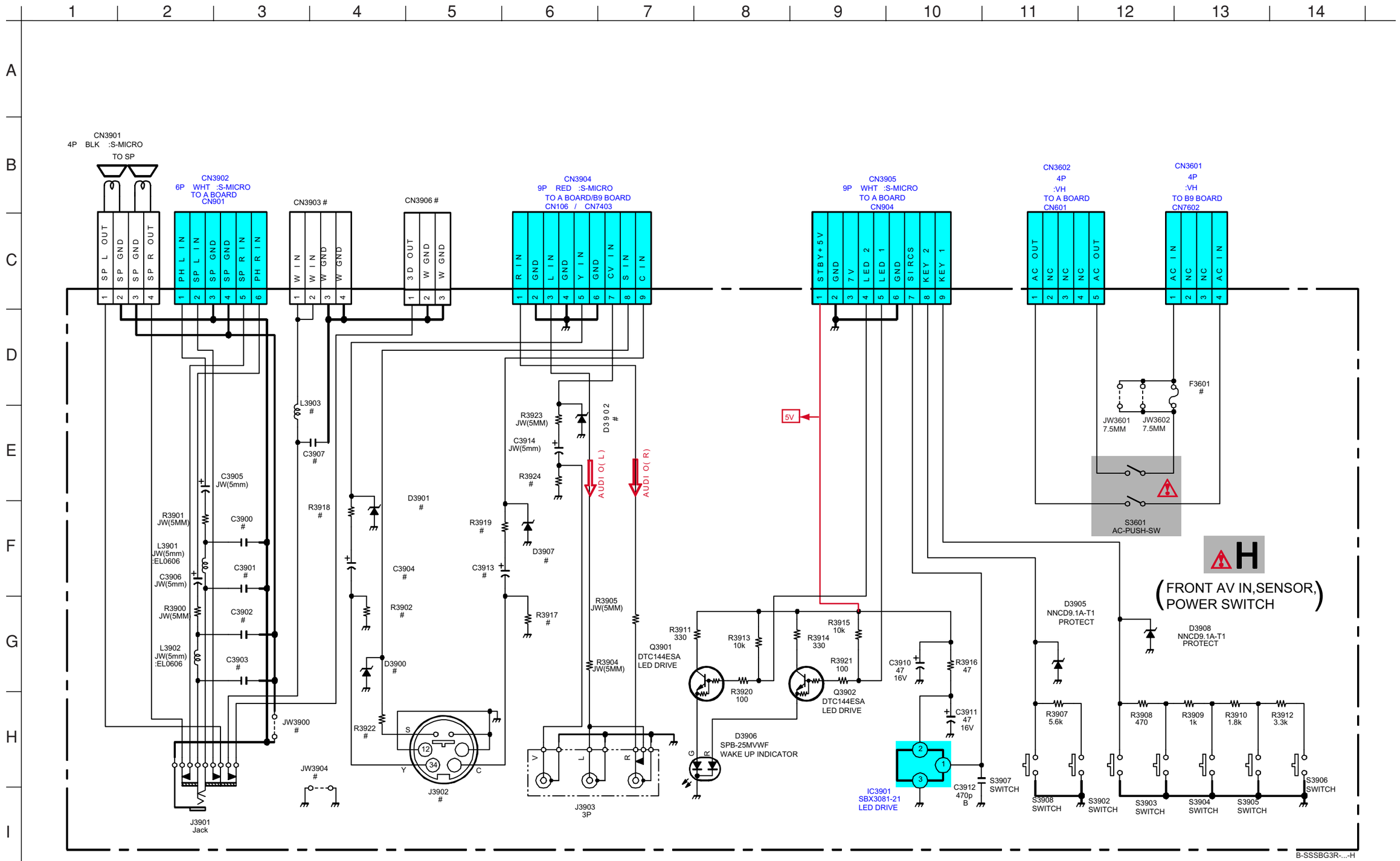
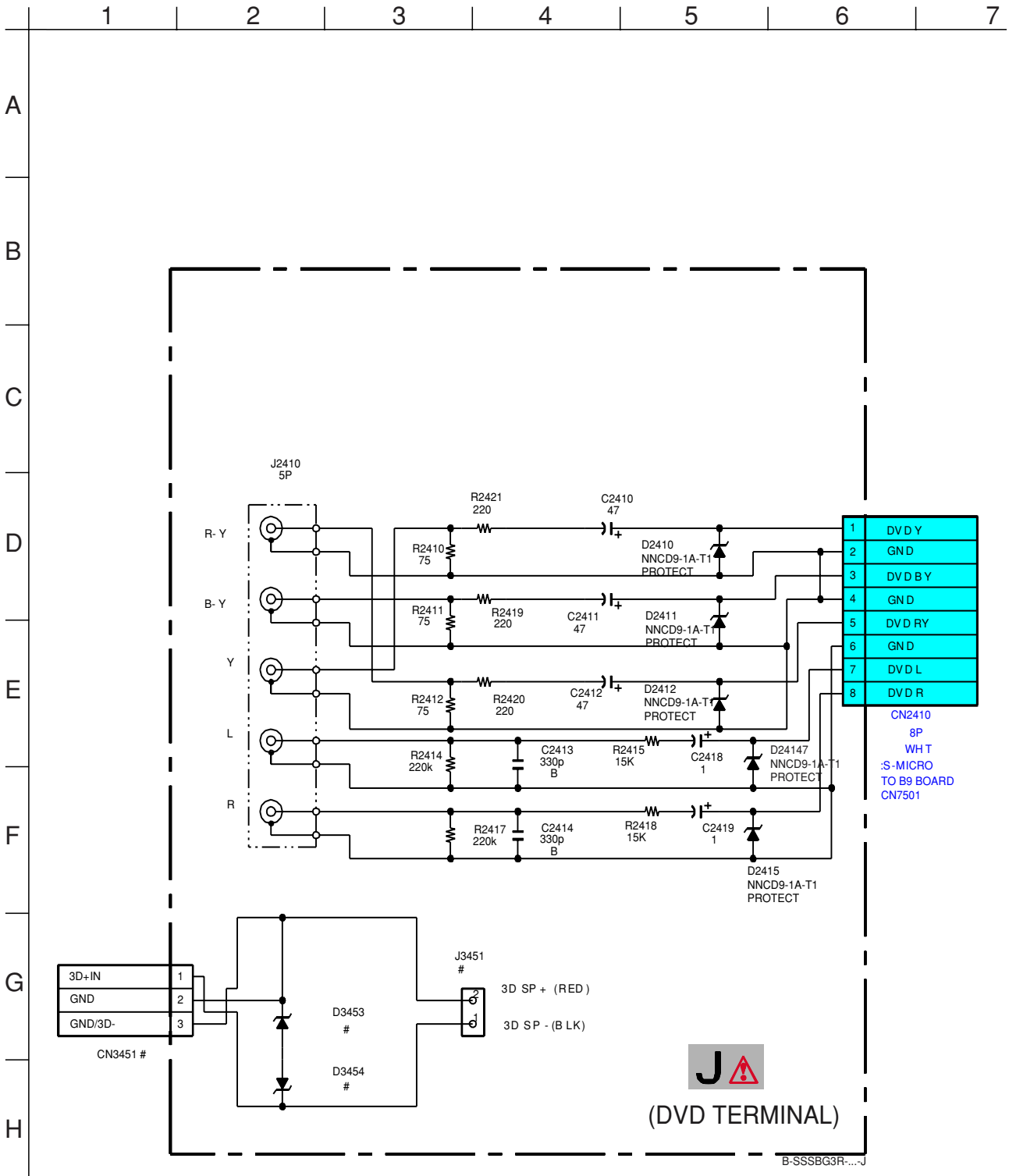
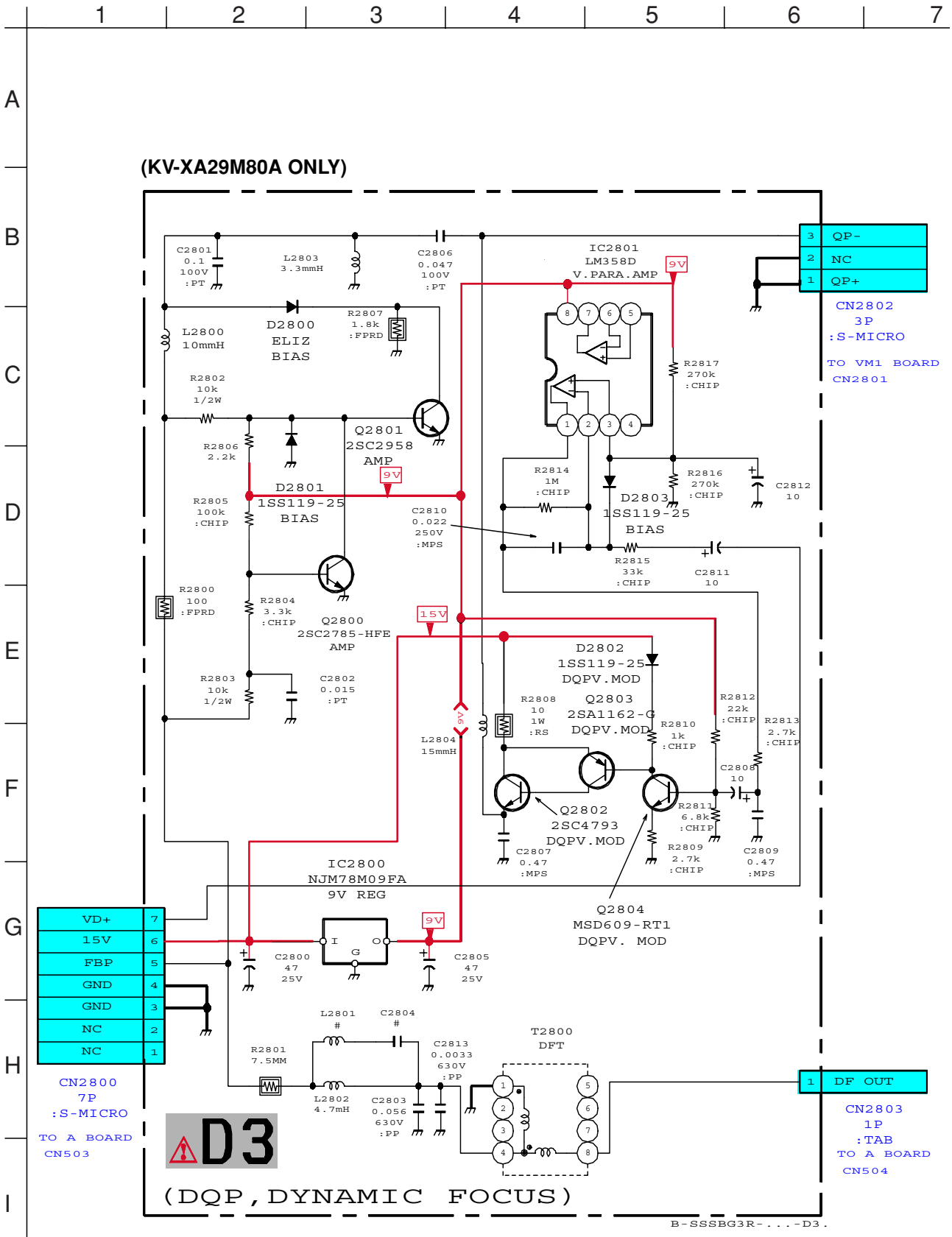
(4) H Board Schematic Diagram



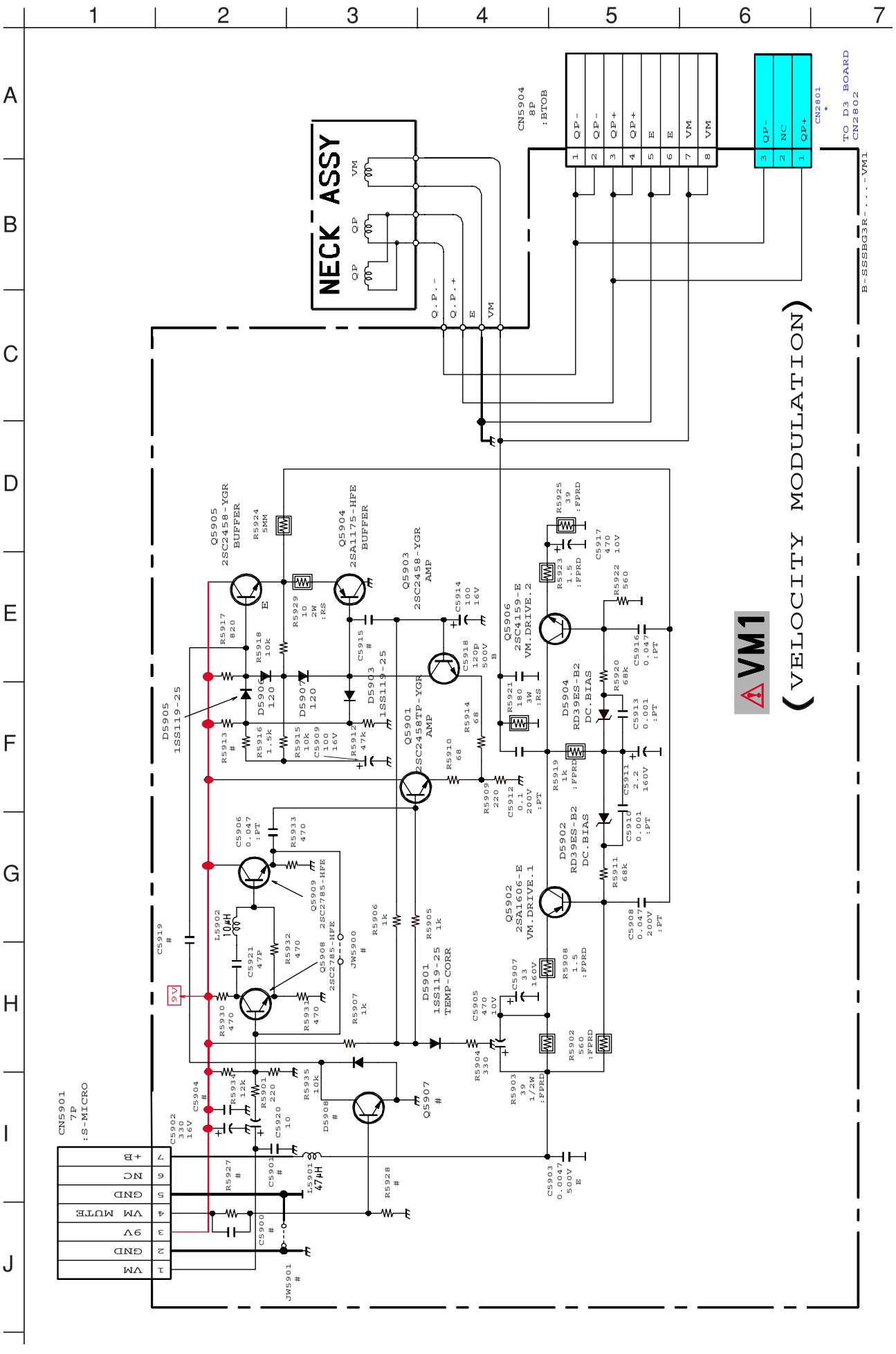
(5) J Board Schematic Diagram



(6) D3 Board Schematic Diagram



(7) VM1 Board Schematic Diagram



A Board ✲ Mark List

	KV-XA25M80A	KV-XA29M80A
C034	100P CH:CHIP	#
C502	0.001P B:CHIP	0.0015P CH:CHIP
C503	#	10
C528	0.001 2KV	680P 2KV B:CHIP
C539	0.047 400V :PP	0.056 630V :PP
C544	1SS355TE-17	#
C548	47P CH:CHIP	#
C554	0.01 200V :PT	0.0047 200V :PT
C561	0.0033 630V :PP	0.0022 630 :PP
C570	0.82 250V :PP	1.0 250V :PP
C572	0.1 250V :PP	0.15 250V :PP
C573	0.033 200V :PT	0.068 200V :PT
C574	10 160V	4.7 160V
C584	#	100P CH:CHIP
C586	0 :CHIP	100P CH:CHIP
CN503	#	7P
CN504	#	TAB, CONTACT
CN508	TAB, CONTACT	#
CN603	#	1P
CN604	3P	2P
D522	ELIZ	D2L20U
D534	0 :CHIP	1SS355TE-17
D615	#	RU4AM-T4
D622	FMU-G26S	#
JR214	#	0 :CHIP
JR502	#	0 :CHIP
L507	10UH	0UH
L511	150UH	0UH
L512	1MMH	#
L513	1MMH	1.5MMH
L515	COIL, WITH CORE	10MMH
Q005	DTA114TKA-T416	#
Q501	#	2SA1162-G
Q502	#	2SA1162-G
R505	150K :RN-CP	100K :RN-CP
R506	27K :RN-CP	22K :CHIP
R508	56 3W :RS	27 3W :RS
R509	120 3W :RS	56 3W :RS
R510	47 2W :RS	56 2W :RS
R511	68 3W :RS	33 3W :RS
R515	220 3W :RS	100 3W :RS
R516	22K :CHIP	#
R517	#	4.7K :CHIP
R525	#	470K :CHIP
R534	0.22 2W :RS	0.39 2W :RS
R537	6.8K :CHIP	8.2K :CHIP
R539	#	1.0K :CHIP
R542	0 :CHIP	10K :CHIP
R548	#	3.9K :CHIP
R549	22K :RN	20K :RN
R551	2.2K	100K :RN-CP
R554	33K :RN	22K :RN
R561	#	1.0K :CHIP
R564	#	39K :CHIP
R573	47K :CHIP	27K :CHIP
R574	470K :CHIP	#
R575	#	3.9K :CHIP
R579	100K :CHIP	0 :CHIP
R582	#	330K :CHIP
R583	330K :CHIP	#
R584	0 :CHIP	220 :CHIP
R587	#	47K :CHIP
R592	#	39K :CHIP
R595	#	10K :CHIP
R596	1K 3W :RS	680 3W :RS
R601	1.5K	1.8K
R654	1.0 2W :RS	#
PS200	1.5A/150V	2.7A/150V
T601	TRANSFORMER LINE FILTER	COIL LINE FILTER

Note: The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

C6 Board ✲ Mark List

	KV-XA25M80A	KV-XA29M80A
C714	390P B:CHIP	330P B:CHIP
C718	#	100P B:CHIP
C1810	#	100P B:CHIP
D717	HZS9-1NB2	NNCD9.1A-T1
L703	47UH	33UH
R711	1.5K 1/2W	1.0K 1/2W
R723	470K :RN	100K :RN
R751	39K 3W :RS	33K 3W :RS
R1802	3.3	1.2
R1803	3.3	1.2
R1811	33K	22K
R1821	33K	22K

Note: The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

VM1 Board ✲ Mark List

	KV-XA25M80A	KV-XA29M80A
CN2801	#	3P

Note: The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

5-4. VOLTAGE MEASUREMENTS

A BOARD VOLTAGE LIST (KV-XA25M80A)

Ref	Pin No	Voltage[v]
IC001	1	0
	2	4.9
	3	0.1
	4	0.1
	5	4.9
	6	4.9
	7	3.9
	8	4.8
	9	0.5
	10	4.8
	11	4.9
	12	0
	13	2.11
	14	2.1
	15	4.9
	16	4.9
	17	0
	18	4.8
	19	2.4
	20	0.2
	21	4.9
	22	0
	23	4.9
	24	0.1
	25	4.8
	26	4.9
	27	4.8
	28	4.9
	29	4.9
	30	0
	31	0
	32	0
	33	4.9
	34	0
	35	0
	36	2.5
	37	2.5
	38	4.8
	39	4.9
	40	0
	41	0.1
	42	0
	43	0
	44	4.9
	45	4.9
	46	4.6
	47	4.9
	48	4.6
	49	0
	50	2.1
	51	0.1
	52	4.7
IC002	1	0
	2	4.9
	3	4.8
	4	7.3
	5	4.9
	6	0
	7	0
IC003	1	0
	2	0
	3	0
	4	0
	5	4.9
	6	0
	7	4.9
	8	4.9
IC100	1	4.8
	2	4.8
	3	0
IC301	1	3.3
	2	5.1
	3	1.4
	4	5.1
	5	4.8
	6	4.4
	7	1.6
	8	3.8
	9	5.1
	10	3.8
	11	5.1
	12	0
	13	3.9
	14	2.3
	15	3.5
	16	3.5
	17	5.4
	18	7.6
	19	0
	20	3.6
	21	3.2
	22	3.8
	23	3.5
	24	1.7
	25	1.8
	26	1.6
	27	0
	28	4.5
	29	4.5
	30	4.5
	31	8.8
	32	4.1
	33	4.1
	34	3.6
	35	8.8
	36	4.6
	37	4.6
	38	4.6
	39	4.7
	40	5.1
	41	5.1
	42	0
	43	5.1
	44	4.9
	45	6.2
	46	5.1
	47	8.8
	48	2.1
	49	5.2
	50	0
	51	0
	52	1.7
IC302	1	1.6
	2	0
	3	1.6
	4	0
	5	1.4
	6	0
	7	4.7
	8	0.6
	9	0
	10	1.1
	11	4.9
	12	4.8
	13	0
	14	1.4
	15	0
	16	0.9
IC502	1	1.3
	2	3.5
	3	1.9
	4	0
	5	2.9
	6	2.6
	7	0
	8	8.9
IC503	1	1.6
	2	13.8
	3	-13.8
	4	-14.8
	5	0.5
	6	13.1
	7	1.6
IC602	1	119.5
	2	135.3
	3	0
IC603	I	12.6
	G	0
	O	8.9
IC604	I	7.8
	G	0
	O	4.9
Q001	B	4.9
	C	0
	E	0.9
Q002	B	0
	C	4.9
	E	09
Q005	B	4.8
	C	0
	E	4.8
Q101	B	2.8
	C	8.9
	E	2.1
Q301	B	12.6
	C	0
	E	12.5
Q302	B	1.6
	C	8.1
	E	0.9
Q303	B	8.1
	C	1.7
	E	8.7
Q304	B	3.6
	C	0
	E	4.3
Q305	B	8.1
	C	2.1
	E	8.7

A BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
Q306	B C E	1.6 8.1 1.0	Q316	B C E	4.1 0 4.7	Q601	B C E	-0.6 -0.4 -0.6
Q307	B C E	4.3 8.7 3.7	Q317	B C E	4.1 0 4.8	Q602	B C E	0 16.7 0
Q308	B C E	3.6 0.5 0.8	Q503	B C E	0 3.6 0	Q603	B C E	16.7 3.9 16.7
Q309	B C E	4.7 0 0	Q505	D G S	21.8 6.4 0	Q604	B C E	134.1 0 134.2
Q310	B C E	2.1 4.8 1.3	Q506	B C E	-0.6 86.9 0	Q605	D G S	310.6 32.1 -0.6
Q311	B C E	0 8.9 0	Q507	B C E	12.6 0.1 13.0	Q606	B C E	-0.1 0.2 -0.6
Q312	B C E	4.8 0 6.2	Q509	B C E	0.6 0.1 0	Q607	B C E	0.7 0 0
Q313	B C E	0 12.5 0	Q511	B C E	-0.1 123.9 0	Q608	B C E	0 0.7 0
Q314	B C E	0.5 0 1.1	Q600	B C E	0 12.6 0	PH600	1 2 3 4	0.2 4.9 0 16.7
Q315	B C E	0 2.9 0						

VM1 BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
Q5901	B C E	2.7 8.9 2.0	Q5904	B C E	4.6 0 5.1	Q5907	B C E	0 0.2 0
Q5902	B C E	135.2 81.2 135.2	Q5905	B C E	5.6 8.9 5.1	Q5908	B C E	3.4 0 0
Q5903	B C E	2.7 4.6 2.0	Q5906	B C E	0.4 81.3 0.1	Q5909	B C E	0 8.9 3.4

C6 BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
IC1800	1	6.4	Q704	B	8.9	Q712	B	1.7
	2	6.4		C	155.1		C	8.4
	3	6.4		E	8.4		E	1.3
	4	6.4	Q705	B	8.9	Q714	B	0.7
	5	0		C	148.9		C	0.2
	6	6.4		E	8.4		E	4.8
	7	6.4	Q706	B	8.2	Q714	B	0.7
	8	6.3		C	151		C	0.2
	9	6.3		E	7.7		E	0
	10	12.7	Q707	B	155.8	Q1800	B	3.8
J701	KR	152.2		C	4.4		C	0
	KG	148.7		E	153.4		E	4.5
	KB	155.9	Q708	B	148.6	Q1802	B	0.4
	H2	0		C	5.6		C	3.4
	G2	312.7		E	147		E	0
Q701	B	154.4	Q709	B	151.6	Q1803	B	0
	C	204.2		C	4.9		C	6.4
	E	156.6		E	149.2		E	0
Q702	B	148.8	Q710	B	1.6			
	C	204.4		C	8.4			
	E	149.3		E	1.2			
Q703	B	150.9	Q711	B	1.8			
	C	203.6		C	8.4			
	E	151.8		E	1.4			

B9 BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]		Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
IC7203	1	4.5		24	0		5	2.5
	2	4.5		25	*		6	2.5
	3	4.5		26	*		7	5.0
	4	4.5		27	*		8	*
	5	4.5		28	0	Q7309	B	5.7
	6	4.5		29	3.8		C	8.8
	7	4.5		30	3.8		E	5.0
	8	4.5		31	3.8	Q7310	B	5.7
	9	4.5		32	3.8		C	8.8
	10	4.5		33	4.5		E	1.8
	11	4.5		34	4.5	Q7401	B	0
	12	4.5		35	4.5		C	0
	13	4.5		36	4.5		E	0
	14	4.5		37	4.5	Q7402	B	*
	15	4.5		38	4.5		C	0
	16	4.5		39	4.5		E	0
	17	4.5		40	4.5	Q7403	B	5.2
	18	4.5		41	4.5		C	0
	19	4.5		42	8.9		E	4.6
	20	4.5	IC7204	1	5.0	Q7404	B	5.2
	21	4.5		2	2.5		C	0
	22	4.5		3	2.5		E	4.5
	23	4.5		4	0			

H BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]
IC3901	1	4.9
	2	4.9
	3	0
Q3901	B	0.1
	C	4.9
	E	0.1
Q3902	B	4.7
	C	2.2
	E	1.8

A BOARD VOLTAGE LIST (KV-XA29M80A)

Ref	Pin No	Voltage[v]
IC001	1	0
	2	4.9
	3	*
	4	5.0
	5	5.0
	6	0
	7	3.9
	8	4.9
	9	0.4
	10	4.9
	11	5.0
	12	0
	13	2.2
	14	2.1
	15	5.0
	16	(5.0)[0.2]
	17	0
	18	0
	19	2.8
	20	*
	21	5.0
	22	0
	23	5.0
	24	*
	25	*
	26	5.0
	27	(3.9)[4.9]
	28	5.0
	29	4.9
	30	0
	31	0
	32	0
	33	5.0
	34	(*)[0]
	35	0
	36	2.6
	37	2.5
	38	4.9
	39	5.0
	40	0
	41	1.0
	42	1.0
	43	0
	44	5.0
	45	5.0
	46	4.6
	47	5.0
	48	4.6
	49	4.6
	50	0
	51	0
	52	0
IC002	1	0
	2	5.0
	3	4.9
	4	7.3
	5	5.9
	6	0
	7	*
IC003	1	0
	2	0
	3	0
	4	0
	5	5.0
	6	5.0
	7	5.0
	8	5.0
IC100	1	4.9
	2	5.0
	3	0
IC201	1	1.3
	2	22.2
	3	11.7
	4	22.6
	5	11.7
	6	22.2
	7	0
	8	22.5
	9	11.6
	10	0.6
	11	0
	12	0
	13	0
	14	0.6
	15	0
IC301	1	3.3
	2	(3.4)[5.0]
	3	2.3
	4	5.0
	5	4.8
	6	4.3
	7	5.4
	8	4.5
	9	4.9
	10	*
	11	*
	12	0
	13	8.2
	14	2.4
	15	3.5
	16	3.5
	17	5.7
	18	7.7
	19	1.0
	20	3.6
	21	3.2
	22	3.9
	23	3.3
	24	2.5
	25	2.5
	26	2.6
	27	*
	28	4.5
	29	4.5
	30	4.5
	31	4.5
	32	4.5
	33	4.0
	34	3.6
	35	*
	36	*
	37	*
	38	4.6
	39	*
	40	5.1
	41	5.0
	42	0
	43	4.9
	44	*
	45	7.4
	46	5.0
	47	8.6
	48	*
	49	4.3
	50	0
	51	0
	52	2.7
IC502	1	0.9
	2	3.6
	3	1.6
	4	0
	5	2.9
	6	2.4
	7	6.9
	8	8.9
IC503	1	1.6
	2	12.9
	3	13.14
	4	14.6
	5	*
	6	13.0
	7	1.6
IC602	1	121.2
	2	127.7
	3	121.2
IC603	I	12.7
	G	0
	O	8.9
IC604	I	8.2
	G	5.0
	O	0
Q001	B	0.8
	C	0
	E	0
Q002	B	0
	C	5.0
	E	0
Q003	B	5.0
	C	0
	E	4.8
Q004	B	0
	C	4.9
	E	0
Q101	B	2.9
	C	8.8
	E	2.2
Q201	B	1.1
	C	0
	E	0
Q202	B	1.1
	C	0
	E	0
Q205	B	11.7
	C	0
	E	0
Q206	B	0
	C	0
	E	0
Q207	B	11.7
	C	0
	E	0
Q301	B	12.6
	C	12.7
	E	12.7
Q302	B	4.7
	C	8.1
	E	4.1

A BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
Q303	B	7.9	Q501	B	3.5	Q601	B	*
	C	3.2		C	0		C	*
	E	3.4		E	0		E	*
Q304	B	3.4	Q502	B	4.2	Q602	B	1.1
	C	0		C	2.4		C	1.2
	E	4.0		E	4.0		E	1.0
Q305	B	4.1	Q503	B	0	Q603	B	1.2
	C	0		C	3.6		C	1.0
	E	4.7		E	0		E	1.2
Q306	B	4.1	Q505	B	6.9	Q604	B	*
	C	0		C	15.7		C	0
	E	(0.4)[0]		E	0		E	133.9
Q307	B	4.3	Q507	B	*	Q605	B	0
	C	4.3		C	0.1		C	0
	E	8.6		E	12.8		E	0
Q308	B	(4.1)[3.5]	Q509	B	0.6	Q606	B	0
	C	0.4		C	0		C	0
	E	(4.7)[1.0]		E	0		E	0
Q313	B	0	Q511	B	0	Q607	B	0.7
	C	12.5		C	*		C	0
	E	0		E	*		E	0
Q315	B	0	Q600	B	0	Q608	B	0
	C	2.5		C	*		C	0
	E	0		E	0		E	0.7

B9 BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
IC7203	1	4.5		24	0		5	2.5
	2	4.5		25	*		6	2.5
	3	4.5		26	*		7	5.0
	4	4.5		27	*		8	*
	5	4.5		28	0	Q7309	B	5.7
	6	4.5		29	3.8		C	8.8
	7	4.5		30	3.8		E	5.0
	8	4.5		31	3.8	Q7310	B	5.7
	9	4.5		32	3.8		C	8.8
	10	4.5		33	4.5		E	1.8
	11	4.5		34	4.5	Q7401	B	0
	12	4.5		35	4.5		C	0
	13	4.5		36	4.5		E	0
	14	4.5		37	4.5	Q7402	B	*
	15	4.5		38	4.5		C	0
	16	4.5		39	4.5		E	0
	17	4.5		40	4.5	Q7403	B	5.2
	18	4.5		41	4.5		C	0
	19	4.5		42	8.9		E	4.6
	20	4.5	IC7204	1	5.0	Q7404	B	5.2
	21	4.5		2	2.5		C	0
	22	4.5		3	2.5		E	4.5
	23	4.5		4	0			

H BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]
IC3901	1	4.8
	2	4.8
	3	0
Q3901	B	0.1
	C	4.9
	E	0.1
Q3902	B	*
	C	1.2
	E	1.3

C6 BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
IC1800	1	10.5	Q705	B	8.8
	2	10.8		C	148
	3	8.2		E	8.2
	4	(0)[8.3]	Q706	B	8.8
	5	0		C	149
	6	7.7		E	8.3
	7	7.7	Q707	B	(146.7)[171.1]
	8	2.4		C	5
	9	2.6		E	142.4
	10	12.2	Q710	B	2.5
J701	G2	(1.7)[295]		C	8.3
	H1	0.7		E	2.5
	KB	142.8	Q712	B	2.4
	KG	(143.3)[146]		C	8.3
	KR	145.5		E	2.4
Q701	B	(146.6)[*]	Q714	B	*
	C	198.9		C	11.2
	E	(146.2)[173]		E	0
Q702	B	148.1	Q1800	B	3.8
	C	198.9		C	0
	E	(148.5)[177]		E	4.5
Q703	B	149.1			
	C	198.8			
	E	(149.2)[180]			
Q704	B	8.8			
	C	*			
	E	8.2			

VM1 BOARD VOLTAGE LIST

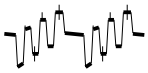
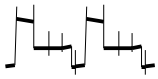
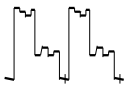
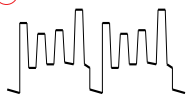
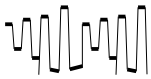
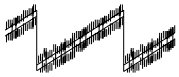
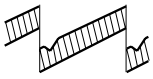
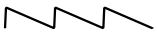
Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
Q5901	B	2.6	Q5904	B	4.6
	C	8.7		C	5.0
	E	1.9		E	0
Q5902	B	134.9	Q5905	B	5.5
	C	(69.9)[73.9]		C	8.7
	E	134.9		E	5.1
Q5903	B	2.6	Q5906	B	0.2
	C	4.6		C	70
	E	1.9		E	72.3

D3 BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
IC2801	1	0.1	Q2801	B	1.6
	2	6.3		C	2.3
	3	0.1		E	0
	4	0	Q2802	B	3.3
	5	6.4		C	12.1
	6	0.1		E	0
	7	0.1	Q2803	B	11.5
	8	12.8		C	3.3
Q2800	B	1.6		E	12.1
	C	2.0	Q2804	B	2.3
	E	0		C	12.0
				E	0

5-5. WAVEFORMS

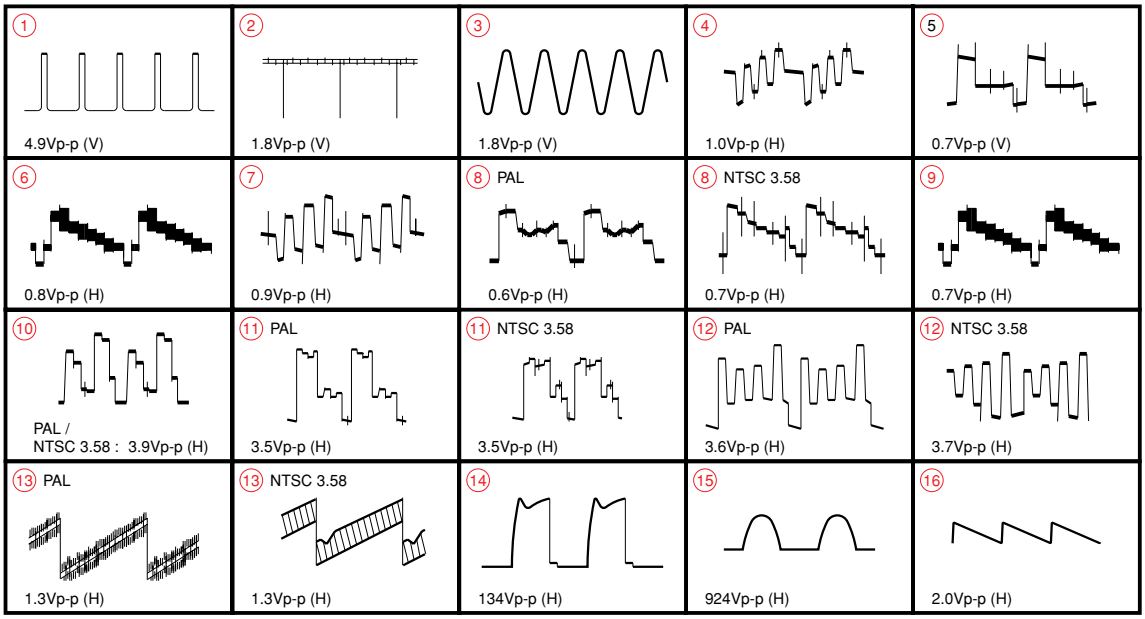
A BOARD WAVEFORMS (KV-XA25M80A)

① 4.9Vp-p (V)	② 1.8Vp-p (V)	③ 1.8Vp-p (V)	④  1.0Vp-p (H)	⑤  0.7Vp-p (V)
⑥ 0.8Vp-p (H)	⑦ 0.9Vp-p (H)	⑧ PAL 0.6Vp-p (H)	⑧ NTSC 3.58 0.7Vp-p (H)	⑨ 0.7Vp-p (H)
⑩ PAL / NTSC 3.58 : 3.9Vp-p (H)	⑪ PAL  3.5Vp-p (H)	⑪ NTSC 3.58 3.5Vp-p (H)	⑫ PAL  3.6Vp-p (H)	⑫ NTSC 3.58  3.7Vp-p (H)
⑬ PAL  1.3Vp-p (H)	⑬ NTSC 3.58  1.3Vp-p (H)	⑭ 134Vp-p (H)	⑮ 924Vp-p (H)	⑯  2.0Vp-p (H)

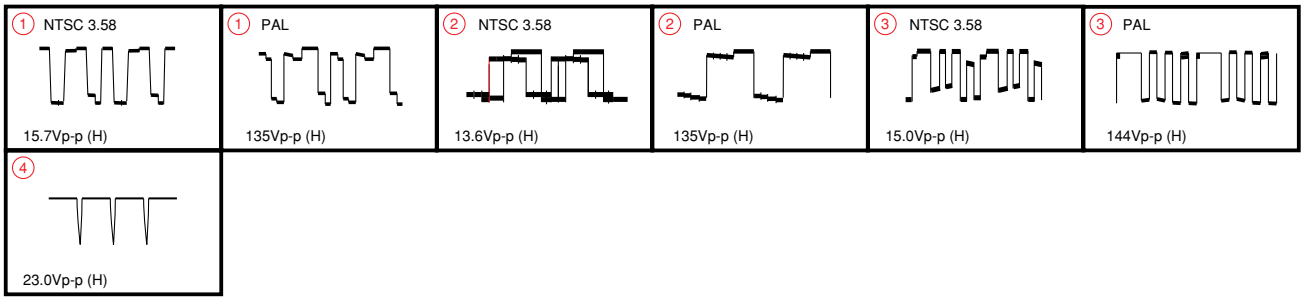
C6 BOARD WAVEFORMS

① PAL 122Vp-p (H)	① NTSC 3.58 140Vp-p (H)	② PAL 122Vp-p (H)
② NTSC 3.58 113Vp-p (H)	③ PAL : 135Vp-p (H) NTSC 3.58 : 126Vp-p (H)	④ PAL /NTSC 3.58 : 23.1Vp-p (H)

A BOARD WAVEFORMS (KV-XA29M80A)



C6 BOARD WAVEFORMS



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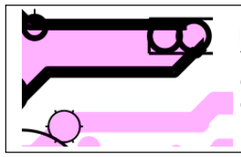
5-6. PRINTED WIRING BOARDS AND PARTS LOCATION

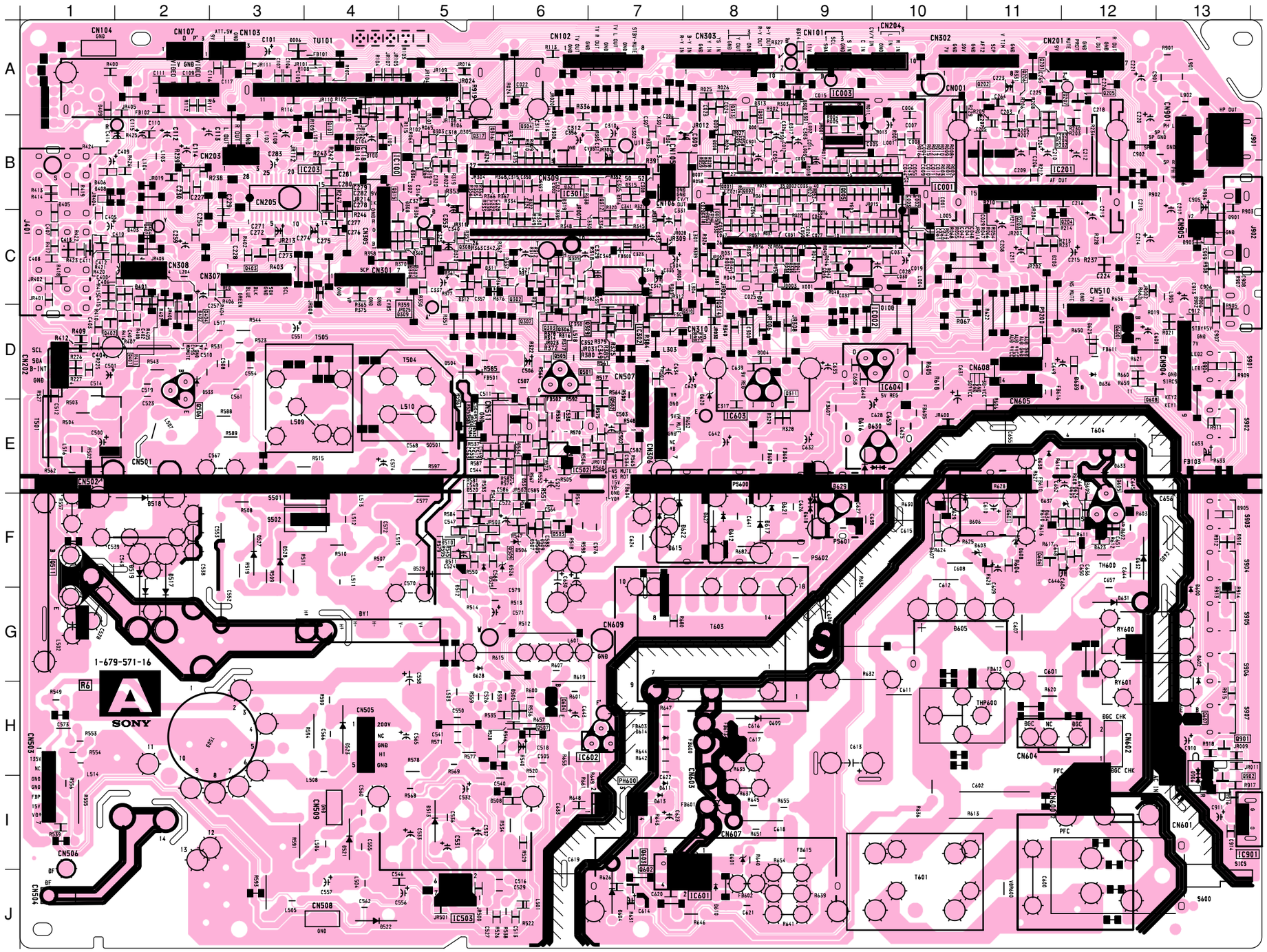
PRINTED WIRING BOARDS

A [SYSTEM CONTROLLER, Y/C JUNGLE, DEFLECTION, TUVIF, FRONT AMP, POWER SUPPLY]



NOTE:
The circuit indicated at left contains high voltage of over 1220 Vp-p. Please pay attention when inspecting or repairing it to prevent an electric shock.

– A Board –



A BOARD

IC		Q607	H-13	D525	F-5
IC001	B-10	Q608	E-12	D526	F-6
IC002	D-10	Q901	H-13	D527	F-3
IC003	A-9	Q902	H-13	D528	F-3
IC100	B-4			D529	F-5
IC201	B-12	DIODE		D531	E-6
IC203	B-4			D532	E-5
IC301	B-6	D001	B-8	D533	D-2
IC302	D-7	D002	B-9	D534	E-6
IC502	E-6	D003	C-9	D600	G-13
IC503	J-5	D004	D-8	D601	I-8
IC601	J-8	D005	B-8	D602	G-13
IC602	H-7	D006	A-3	D603	F-11
IC603	E-8	D007	B-8	D604	J-7
IC604	D-10	D008	B-8	D605	G-10
		D009	B-8	D606	E-11
TRANSISTOR		D010	D-10	D607	F-10
		D011	C-8	D608	F-11
Q001	B-8	D100	B-4	D609	H-8
Q002	B-8	D203	C-11	D610	J-8
Q005	B-9	D300	A-9	D611	J-7
Q101	B-4	D301	B-9	D612	F-8
Q201	A-11	D303	B-5	D613	I-7
Q202	A-11	D304	B-5	D615	E-7
Q203	C-11	D305	B-5	D616	E-9
Q204	C-12	D306	C-5	D617	F-8
Q205	A-12	D307	C-5	D618	F-9
Q206	A-11	D308	B-5	D620	E-8
Q207	A-12	D309	D-5	D621	F-9
Q301	B-8	D311	C-5	D622	F-7
Q302	C-6	D312	C-5	D623	F-12
Q303	D-6	D313	A-8	D624	E-12
Q304	B-6	D314	A-9	D625	D-12
Q305	C-6	D315	B-7	D627	F-8
Q306	D-6	D316	B-7	D628	G-5
Q307	D-6	D317	B-9	D629	E-9
Q308	C-5	D319	B-6	D630	E-10
Q310	D-8	D320	C-5	D631	G-12
Q311	D-9	D321	B-6	D632	F-12
Q312	B-7	D322	B-6	D633	E-12
Q313	A-8	D401	C-2	D634	F-11
Q314	D-8	D402	D-2	D635	E-12
Q315	B-4	D403	C-2	D636	D-12
Q316	B-5	D404	C-2	D637	F-11
Q317	B-5	D405	B-1	D638	E-11
Q401	D-2	D406	B-1	D639	D-12
Q402	D-1	D407	C-2	D901	C-13
Q403	C-3	D408	B-1	D902	C-13
Q404	D-2	D409	A-1	D903	C-13
Q501	D-6	D504	D-5	D904	D-13
Q502	E-7	D505	H-6	D905	F-13
Q503	F-6	D506	F-6	D906	H-13
Q505	D-6	D507	F-6	PH600	I-7
Q506	E-2	D508	I-6		
Q507	H-6	D510	F-5		
Q509	F-6	D511	F-5		
Q511	F-1	D512	F-5		
Q600	D-12	D513	I-5		
Q601	F-11	D517	F-2		
Q602	I-7	D518	F-2		
Q603	I-7	D519	F-2		
Q604	H-6	D520	E-5		
Q605	E-12	D521	I-4		
Q606	F-11	D522	J-4		
		D523	H-4		

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PRINTED WIRING BOARDS

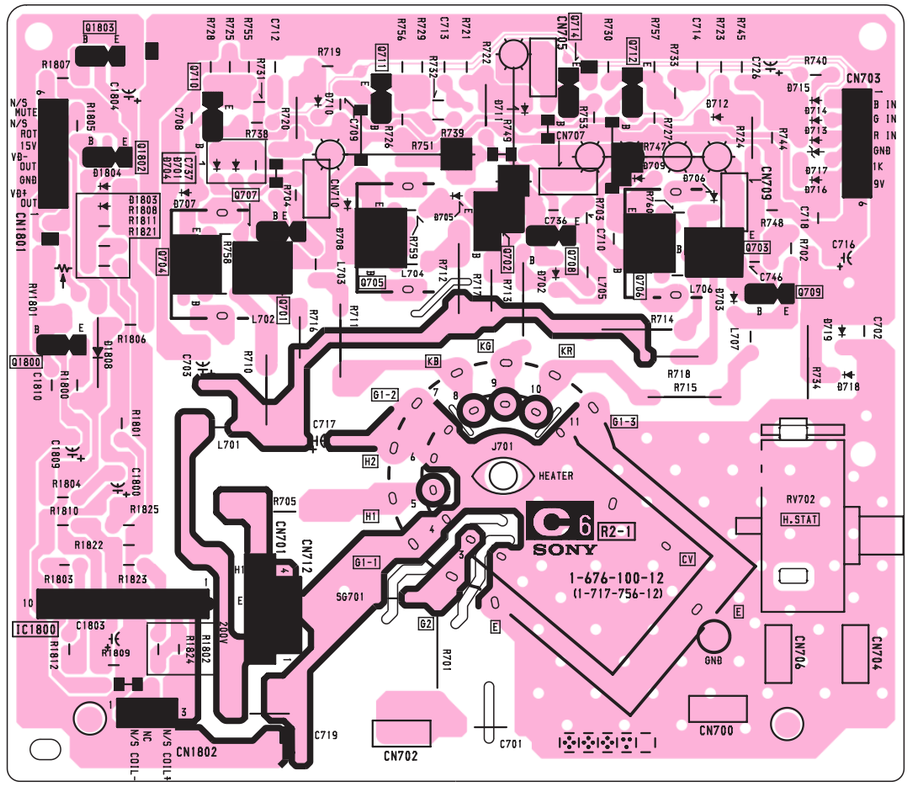
C6 [RGB OUT, PICTURE ROTATION]

H [FRONT AV IN, SENSOR, POWER SWITCH]

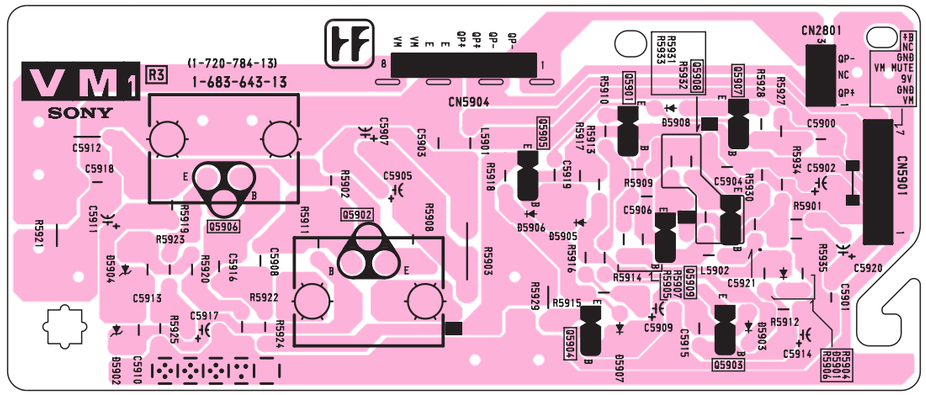
VM1 [VELOCITY MODULATION]

J [DVD TERMINAL]

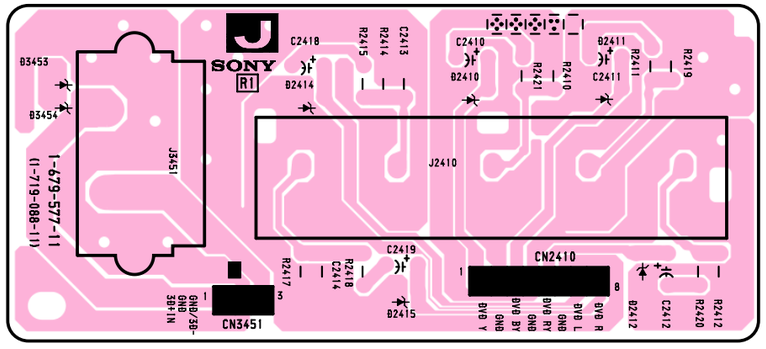
– C6 Board –



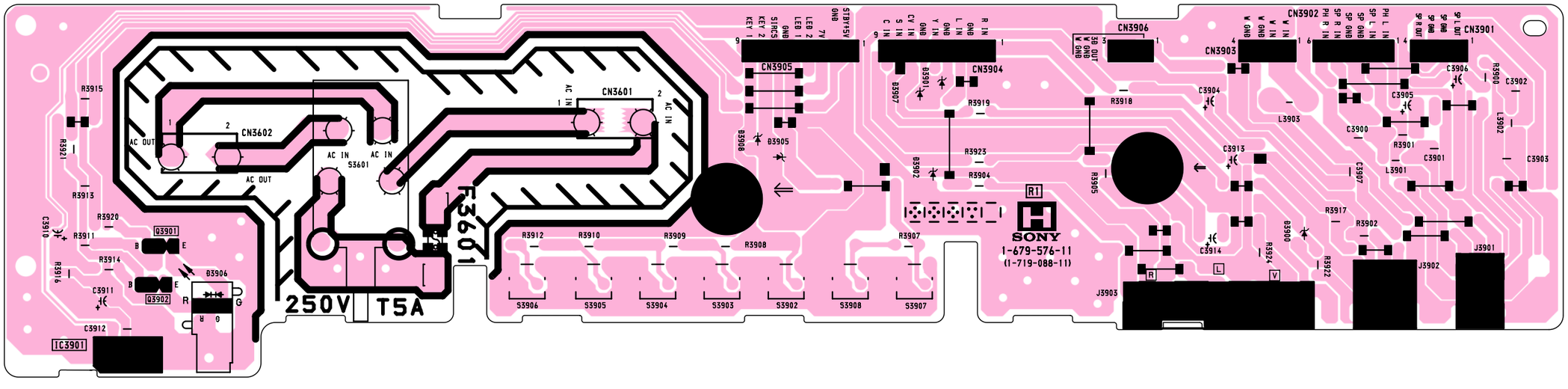
– VM1 Board –



– J Board –



– H Board –

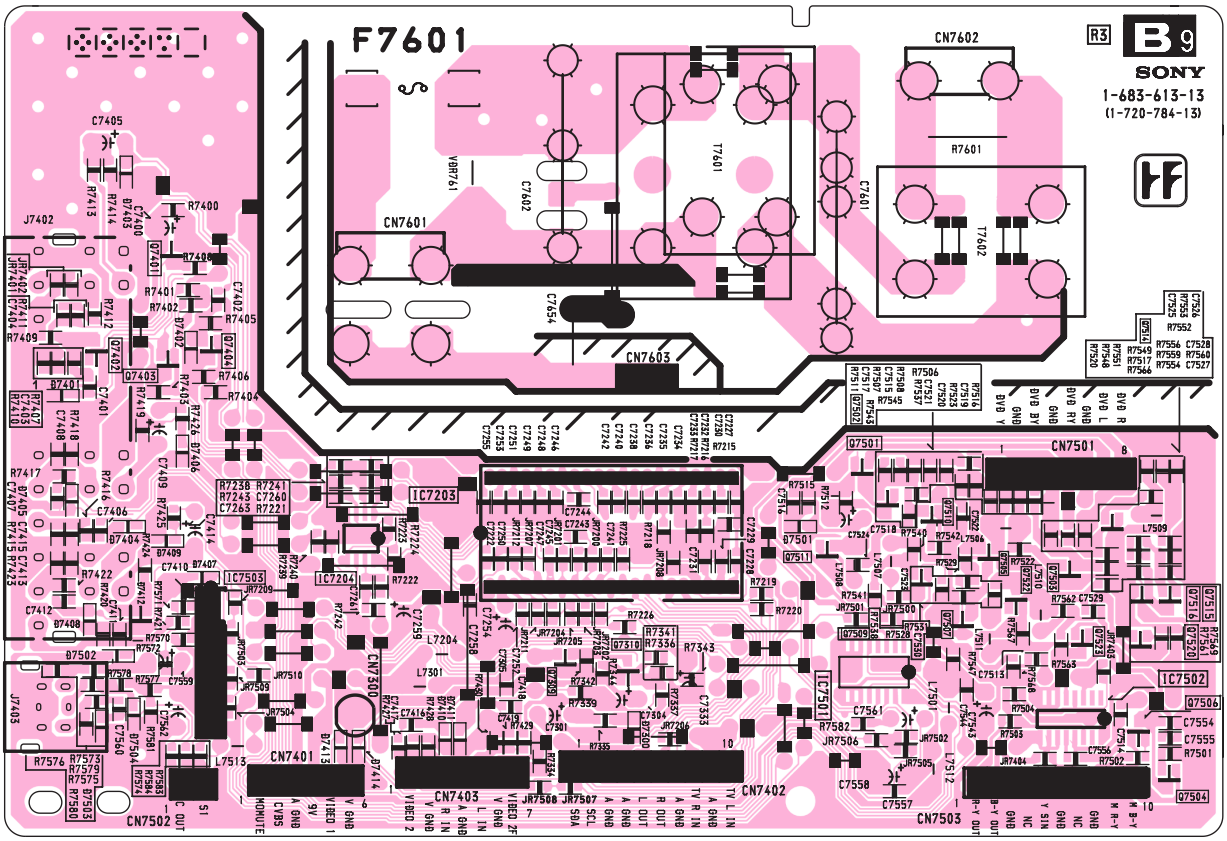


PRINTED WIRING BOARDS

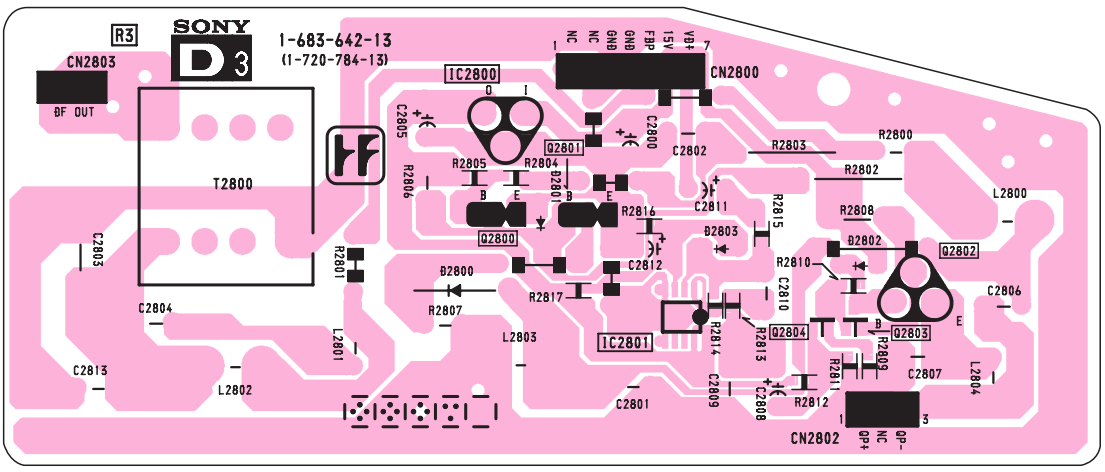
B9 [CISPR, AC FUSE, A/V INPUT, DVD SWITCH, MONITOR OUT]

D3 [DQP, DYNAMIC FOCUS]

– B9 Board –

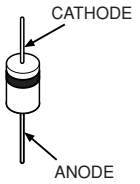
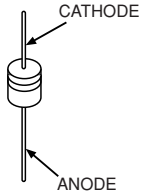
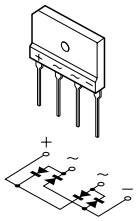
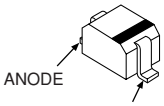
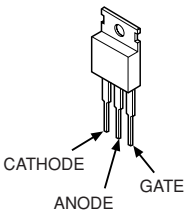


– D3 Board – (KV-XA29M80A ONLY)



5-7. SEMICONDUCTORS

DIODE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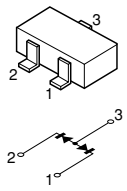
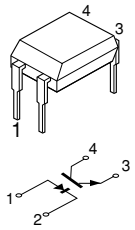
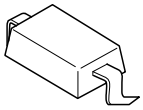
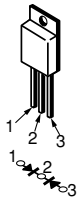
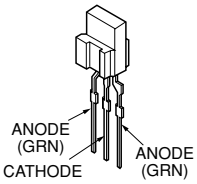
LED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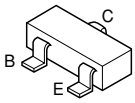
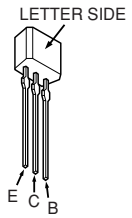
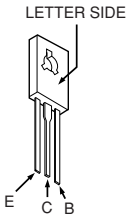
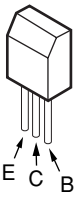
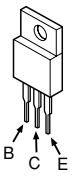
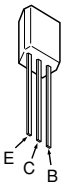
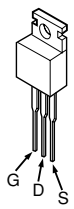
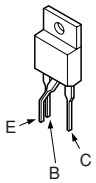
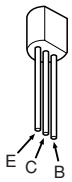
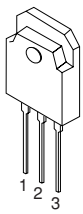
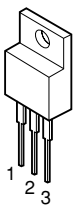
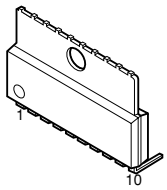
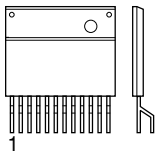
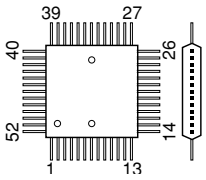
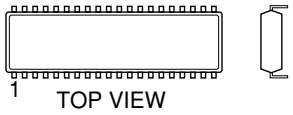
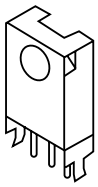
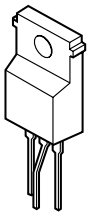
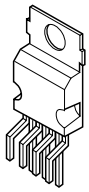
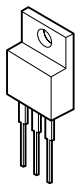
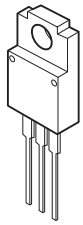
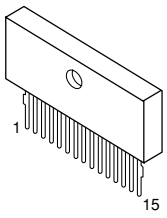
TRANSISTOR

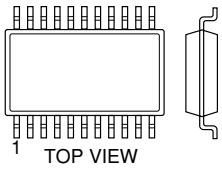
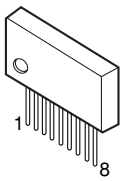
					
MSD601-RT1 UN2111 UN2213 UN2216 2SA1162-G 2SD2114K	DTC144ESA 2SA1175-HFE 2SC2785-HFE DTA114TKA-T146	2SC2611 2SC2688-LK	2SC2958	2SA1606-E 2SC4159-E	2SC2458-YGR 2SC3576

IC

					
IRF614	2SK2845-LB102	2SA1091-0 2SC2551-0	2SD2578-CA	2SC4793	LA6510

MARKING SIDE VIEW  Zig-zag In -line Package Pin 6～99	MARKING SIDE VIEW  RU-1P	 TOP VIEW Dual In-line Package Pin 6～98
STR-F6456S		CXA2159S CXP86461-638S (64PIN) M24C08-BN6 (8PIN) TDA7429S (15PIN) TDA9181T

					
SBX3081-21	SE-135N	TDA8172	NJM78M09FA	TA7805S	TA8223K

 TOP VIEW Small outline L-leaded Pin 8～98	
LM358D (8PIN) MC145053BF MM1319AFBE (7PIN) NJM2903M (8PIN) UPC4558G2 (8PIN)	NJM2234L

SECTION 6
EXPLODED VIEWS

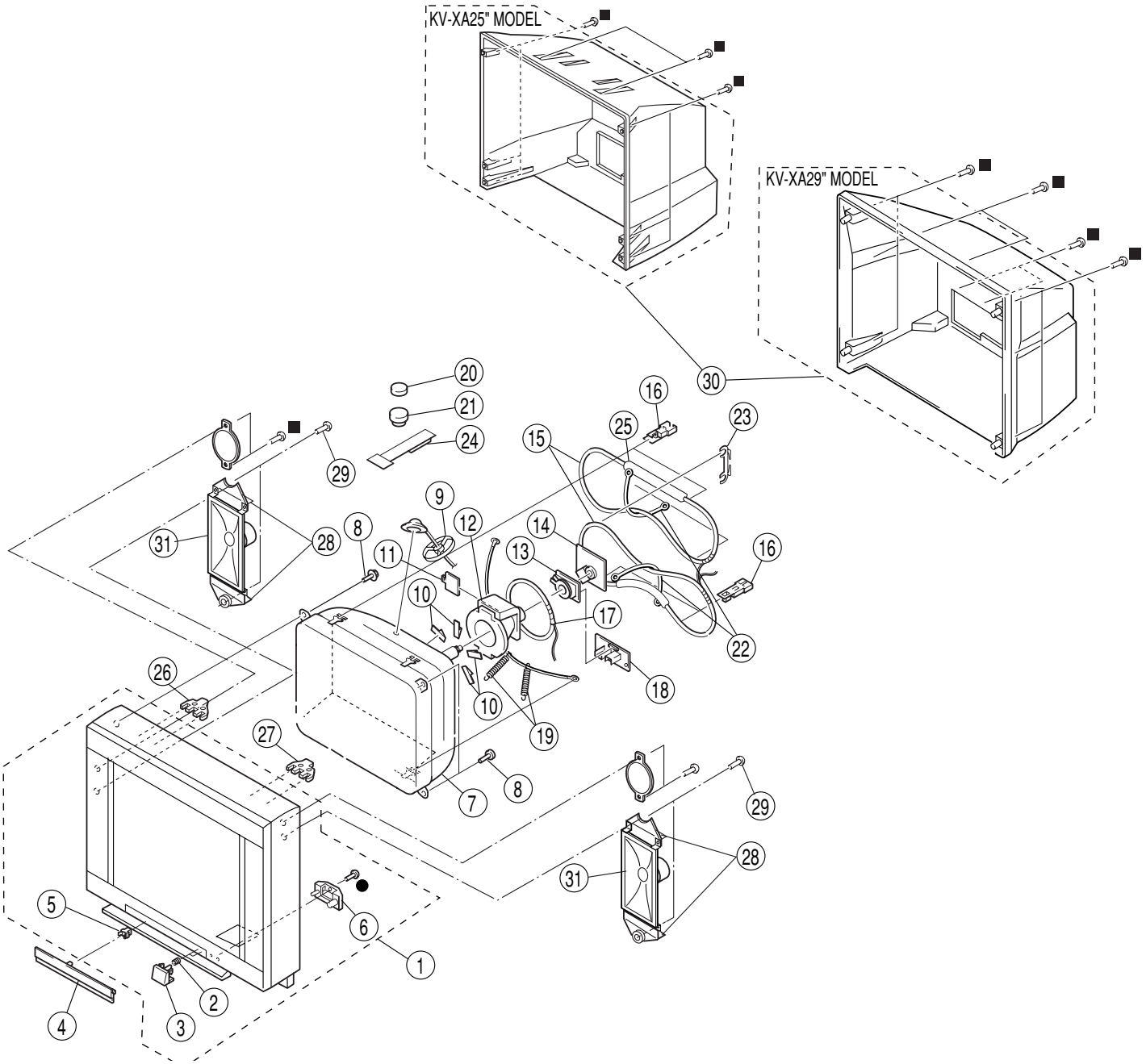
NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. PICTURE TUBE

●: 7-685-648-79 SCREW BVTP 3 × 12
■: 7-685-663-71 SCREW BVTP 4 × 16

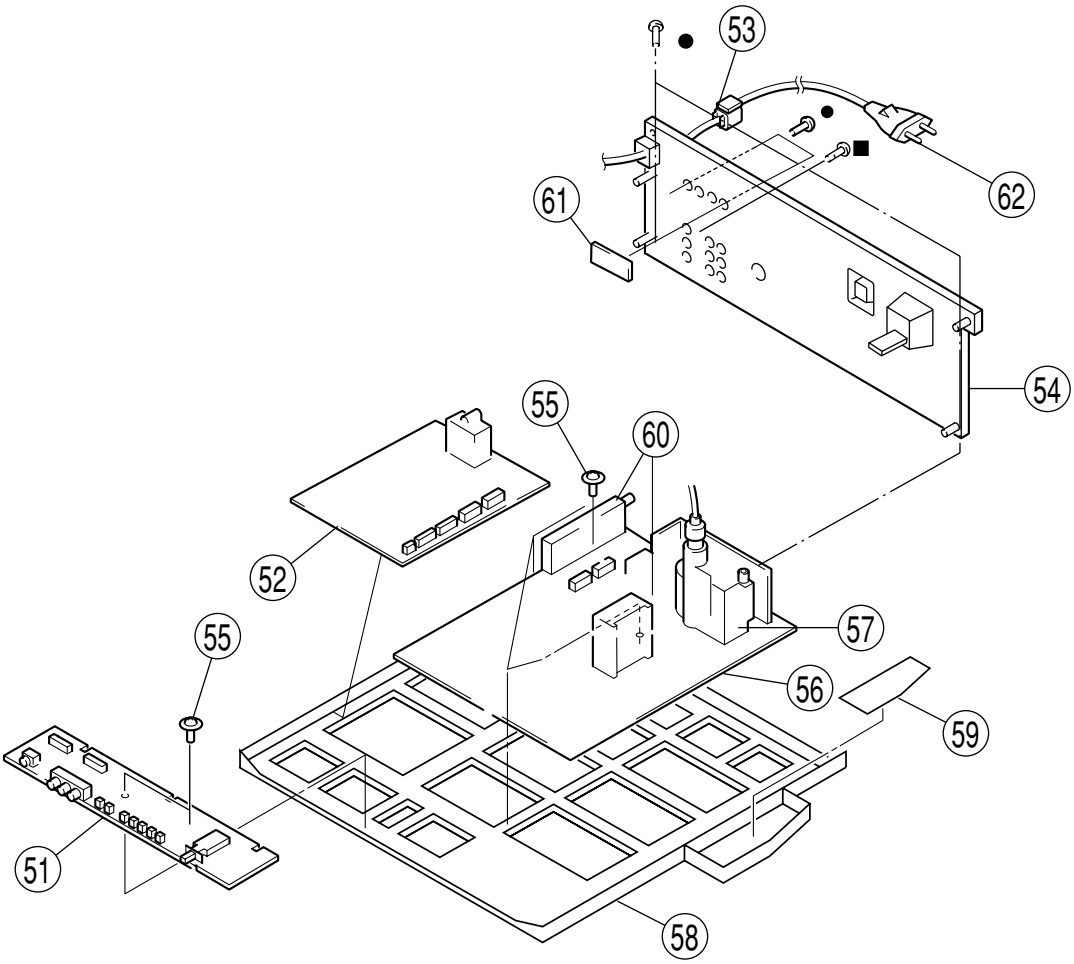


REF. NO.		PART NO.	DESCRIPTION	REMARK
1		X-4040-498-2	BEZNET ASSY (KV-XA25M80A)	2, 3, 5, 6
		X-4040-349-1	BEZNET ASSY (KV-XA29M80A)	
2		4-036-405-11	SPRING, COMPRESSION	
3		4-075-747-41	BUTTON, POWER(KV-XA25M80A)	
		4-075-747-11	BUTTON, POWER(KV-XA29M80A)	
4		4-086-702-41	DOOR, CONTROL(KV-XA25M80A)	
		4-088-970-01	DOOR, CONTROL(KV-XA29M80A)	
5		4-047-464-01	CATCHER PUSH	
6	*	4-075-749-01	GUIDE LIGHT	
7	⚠	8-733-250-05	PICTURE TUBE (A60LPN70X) (KV-XA25M80A)	
	⚠	8-735-056-05	PICTURE TUBE (M68LNH070X) (KV-XA29M80A)	
8		4-046-765-12	SCREW, TAPPING 7+CROWN WASHER	
9	*	3-704-372-81	HOLDER, HV CABLE	
10		4-046-600-11	SPACER, DY	
11		4-057-714-01	PIECE, TLH CONVENGENCE (KV-XA25M80A)	
		4-077-228-02	PIECE, TLH CONVENGENCE (KV-XA29M80A)	
12	⚠	1-451-475-11	DEFLECTION YOKE (Y25RSA) (KV-XA25M80A)	
	⚠	8-451-494-31	DEFLECTION YOKE (Y29RSA-S)	
			(KV-XA29M80A)	
13		8-453-011-21	NA299-S (KV-XA25M80A)	
		8-453-011-41	NA299-C (KV-XA29M80A)	
14	*	A-1401-120-A	C6 BOARD MOUNTED (KV-XA25M80A)	
	*	A-1401-084-A	C6 BOARD MOUNTED (KV-XA29M80A)	
15	⚠	1-419-322-11	COIL, DEGAUSING (KV-XA25M80A)	
	⚠	1-419-323-11	COIL, DEGAUSING (KV-XA29M80A)	

REF. NO.		PART NO.	DESCRIPTION	REMARK
16	*	4-065-572-01	CLIP (25RSN), DGC (KV-XA25M80A)	
	*	4-062-970-12	CLIP (29RSN), DGC (KV-XA29M80A)	
17		1-452-896-61	COIL, NA ROTATION (RT200) (KV-XA25M80A)	
		1-452-896-11	COIL, NA ROTATION (RT200) (KV-XA29M80A)	
18	*	A-1401-121-A	VM1 BOARD MOUNTED (KV-XA25M80A)	
	*	A-1401-088-A	VM1 BOARD MOUNTED (KV-XA29M80A)	
19		4-369-318-61	SPRING, TENSION	
20		1-452-032-00	MAGNET,DISC	
21		1-452-094-00	CIRCULAR DISC MAGNET B	
22		4-079-376-01	BAND, DGC	
23		4-064-883-03	HOLDER, DGC	
24		X-4387-214-3	PERMALOY ASSY, CORRECTION	
25		4-063-935-21	CUSHION (50 × 550) DGC	
26	*	X-4038-461-4	CRT (TOP RIGHT) SUPPORT ASSY	
			(KV-XA29M80A)	
27	*	X-4038-460-4	CRT (TOP LEFT) SUPPORT ASSY	
			(KV-XA29M80A)	
28	*	4-046-981-31	BRACKET SPEAKER	
29		4-302-404-03	SCREW (WASHER HEAD) (+P4 × 16)	
30	⚠	X-4038-947-1	REAR COVER ASSY (■ 11 SCREWS)	
			(KV-XA25M80A)	
	⚠	X-4038-161-1	REAR COVER ASSY (■ 12 SCREWS)	
			(KV-XA29M80A)	
31		1-825-028-11	SPEAKER (15 × 6.5CM-)	

6-2. CHASSIS

●: 7-685-648-79 SCREW BVTP 3 × 12
■: 7-685-663-71 SCREW BVTP 4 × 16



REF. NO.	PART NO.	DESCRIPTION	REMARK
51	* A-1401-086-A	H BOARD MOUNTED	
52	* A-1300-559-A	B9 BOARD COMPLETE	
53	⚠ 4-022-115-00	HOLDER, AC CORD	
54	* 4-081-023-03	BRACKET, TERMINAL (KV-XA25M80A)	
	* 4-075-447-33	BRACKET, TERMINAL (KV-XA29M80A)	
55	4-046-797-01	SCREW (3 × 12), (+)BVTAP	
56	* A-1300-577-A	A BOARD COMPLETE (KV-XA25M80A)	
	* A-1300-558-A	A BOARD COMPLETE (KV-XA29M80A)	
57	⚠ 1-453-357-21	TRANSFORMER ASSY, FLYBACK (NX-4009//M3B4) (KV-XA25M80A)	
	⚠ 1-453-284-11	TRANSFORMER ASSY, FLYBACK (NX-4009//M314) (KV-XA29M80A)	

REF. NO.	PART NO.	DESCRIPTION	REMARK
58	* 4-066-681-05	BRACKET, MAIN	
59	* A-1400-085-A	D3 BOARD MOUNTED (KV-XA29M80A)	
60	8-598-449-10	TUNER, FSS BTF-LG433	
61	* A-1400-087-A	J BOARD MOUNTED	
62	⚠ 1-790-127-11	CORD POWER	

A

SECTION 7
ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All resistors are in ohms
- F : nonflammable

CAPACITORS
- MF : µF, PF : µµF

COILS
- MMH : mH, UH : µH

REF NO.	PART NO.	DESCRIPTION			REMARK
	* A-1300-577-A	A BOARD COMPLETE (KV-XA25M80A)			
	* A-1300-558-A	A BOARD COMPLETE (KV-XA29M80A)			
		**********			
	* 4-374-846-01	COVER, CAPACITOR, CAP TYPE			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
	4-382-854-21	SCREW (M3X14), P, SW (+)			
		<CAPACITOR>			
C004	1-162-960-11	CERAMIC CHIP	220PF	10.00%	50V
C005	1-162-960-11	CERAMIC CHIP	220PF	10.00%	50V
C006	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C007	1-126-947-11	ELECT	47UF	20.00%	16V
C013	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C014	1-126-947-11	ELECT	47UF	20.00%	25V
C015	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C016	1-163-243-11	CERAMIC CHIP	47PF	5.00%	50V
C017	1-162-925-11	CERAMIC CHIP	68PF	5.00%	50V
C019	1-126-947-11	ELECT	47UF	20.00%	25V
C022	1-162-915-11	CERAMIC CHIP	10PF	0.50PF	50V
C023	1-162-915-11	CERAMIC CHIP	10PF	0.50PF	50V
C024	1-162-915-11	CERAMIC CHIP	10PF	0.50PF	50V
C026	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C027	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C028	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C030	1-126-965-91	ELECT	22UF	20.00%	50V
C031	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C032	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C034	1-162-927-11	CERAMIC CHIP (KV-XA25M80A ONLY)	100PF	5.00%	50V
C041	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C042	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C044	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C047	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C051	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C055	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C103	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C104	1-104-665-11	ELECT	100UF	20.00%	10V
C107	1-162-962-11	CERAMIC CHIP	470PF	10.00%	50V
C108	1-126-947-11	ELECT	47UF	20.00%	16V
C109	1-162-962-11	CERAMIC CHIP	470PF	10.00%	50V
C110	1-162-962-11	CERAMIC CHIP	470PF	10.00%	50V
C111	1-162-962-11	CERAMIC CHIP	470PF	10.00%	50V
C112	1-126-947-11	ELECT	47UF	20.00%	16V
C113	1-126-947-11	ELECT	47UF	20.00%	25V
C114	1-126-967-11	ELECT	47UF	20.00%	50V
C202	1-163-020-00	CERAMIC CHIP	0.0082UF	10.00%	50V
C203	1-163-020-00	CERAMIC CHIP	0.0082UF	10.00%	50V
C204	1-136-175-00	FILM	0.68UF	5.00%	50V
C207	1-136-175-00	FILM	0.68UF	5.00%	50V

REF NO.	PART NO.	DESCRIPTION			REMARK
C208	1-126-967-11	ELECT	47UF	20.00%	50V
C209	1-126-967-11	ELECT	47UF	20.00%	50V
C210	1-126-933-11	ELECT	100UF	20.00%	16V
C211	1-126-941-11	ELECT	470UF	20.00%	25V
C212	1-126-933-11	ELECT	100UF	20.00%	16V
C213	1-126-933-11	ELECT	100UF	20.00%	16V
C214	1-126-942-61	ELECT	1000UF	20.00%	25V
C215	1-126-942-61	ELECT	1000UF	20.00%	25V
C216	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C217	1-126-964-11	ELECT	10UF	20.00%	50V
C218	1-136-167-00	FILM	0.15UF	5.00%	50V
C219	1-136-167-00	FILM	0.15UF	5.00%	50V
C220	1-126-942-61	ELECT	1000UF	20.00%	25V
C221	1-126-964-11	ELECT	10UF	20.00%	50V
C223	1-126-965-91	ELECT	22UF	20.00%	50V
C224	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C225	1-109-982-11	CERAMIC CHIP	1UF	10.00%	10V
C226	1-109-982-11	CERAMIC CHIP	1UF	10.00%	10V
C264	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C265	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C300	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C301	1-126-935-11	ELECT	470UF	20.00%	16V
C302	1-162-962-11	CERAMIC CHIP	470PF	10.00%	50V
C303	1-126-964-11	ELECT	10UF	20.00%	50V
C304	1-126-967-11	ELECT	47UF	20.00%	50V
C305	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C306	1-162-918-11	CERAMIC CHIP	18PF	5.00%	50V
C307	1-162-918-11	CERAMIC CHIP	18PF	5.00%	50V
C308	1-163-259-91	CERAMIC CHIP	220PF	5.00%	50V
C309	1-137-378-11	MYLAR	0.22UF	5.00%	50V
C310	1-126-963-11	ELECT	4.7UF	20.00%	50V
C311	1-126-964-11	ELECT	10UF	20.00%	50V
C312	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C313	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C316	1-126-934-11	ELECT	220UF	20.00%	16V
C317	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C318	1-162-974-11	CERAMIC CHIP	0.01UF		50V
C319	1-162-974-11	CERAMIC CHIP	0.01UF		50V
C320	1-162-974-11	CERAMIC CHIP	0.01UF		50V
C322	1-162-962-11	CERAMIC CHIP	470PF	10.00%	50V
C324	1-162-968-11	CERAMIC CHIP	0.0047UF	10.00%	50V
C325	1-126-960-11	ELECT	1UF	20.00%	50V
C327	1-126-965-91	ELECT	22UF	20.00%	50V
C328	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C329	1-126-963-11	ELECT	4.7UF	20.00%	50V
C330	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C331	1-126-963-11	ELECT	4.7UF	20.00%	50V
C332	1-126-963-11	ELECT	4.7UF	20.00%	50V
C335	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C336	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V

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REF NO.	PART NO.	DESCRIPTION		REMARK	
C337	1-126-961-11	ELECT	2.2UF	20.00%	50V
C341	1-115-340-11	CERAMIC CHIP	0.22UF	10.00%	25V
C342	1-163-259-91	CERAMIC CHIP	220PF	5.00%	50V
C347	1-126-933-11	ELECT	100UF	20.00%	16V
C348	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C349	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C350	1-162-974-11	CERAMIC CHIP	0.01UF		50V
C351	1-126-964-11	ELECT	10UF	20.00%	50V
C352	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C353	1-126-960-11	ELECT	1UF	20.00%	50V
C356	1-126-960-11	ELECT	1UF	20.00%	50V
C357	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C502	1-162-964-11	CERAMIC CHIP (KV-XA25M80A)	0.001UF	10.00%	50V
C502	1-163-145-00	CERAMIC CHIP (KV-XA29M80A)	0.0015UF	5.00%	50V
C503	1-126-964-11	ELECT (KV-XA29M80A ONLY)	10UF	20.00%	50V
C506	1-107-638-11	ELECT	33UF	20.00%	160V
C507	1-161-830-00	CERAMIC	0.0047UF		500V
C510	1-102-112-00	CERAMIC	330PF	10.00%	50V
C512	1-163-989-11	CERAMIC CHIP	0.033UF	10.00%	25V
C513	1-163-263-11	CERAMIC CHIP	330PF	5.00%	50V
C514	1-106-383-00	MYLAR	0.047UF	10.00%	200V
C517	1-162-967-11	CERAMIC CHIP	0.0033UF	10.00%	50V
C518	1-104-665-11	ELECT	100UF	20.00%	10V
C519	1-102-212-00	CERAMIC	820PF	10.00%	500V
C521	1-126-934-11	ELECT	220UF	20.00%	16V
C522	1-126-933-11	ELECT	100UF	20.00%	16V
C523	1-102-002-00	CERAMIC	680PF	10.00%	500V
C524	1-126-967-11	ELECT	47UF	20.00%	50V
C526	1-130-495-00	MYLAR	0.1UF	5.00%	50V
C527	1-102-820-00	CERAMIC	330PF	5.00%	50V
C528	1-161-754-00	CERAMIC (KV-XA25M80A)	0.001UF	10.00%	2KV
C528	1-162-116-00	CERAMIC (KV-XA29M80A)	680PF	10.00%	2KV
C530	1-137-372-11	MYLAR	0.022UF	5.00%	50V
C531	1-107-903-11	ELECT	2.2UF	20.00%	50V
C532	1-126-941-11	ELECT	470UF	20.00%	25V
C533	1-126-941-11	ELECT	470UF	20.00%	25V
C534	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C536	1-136-165-00	FILM	0.1UF	5.00%	50V
C537	1-126-969-11	ELECT	220UF	20.00%	50V
C538	1-127-717-11	FILM	19000PF	3%	1.2KV
C539	1-130-959-91	FILM (KV-XA25M80A)	0.047UF	5.00%	400V
C539	1-129-723-00	FILM (KV-XA29M80A)	0.056UF	5.00%	630V
C540	1-136-171-00	FILM	0.33UF	5.00%	50V
C544	8-719-988-61	1SS355TE-17 (KV-XA25M80A ONLY)			
C546	1-165-319-11	CERAMIC CHIP	0.1UF		50V
C548	1-163-243-11	CERAMIC CHIP (KV-XA25M80A ONLY)	47PF	5.00%	50V
C549	1-162-968-11	CERAMIC CHIP	0.0047UF	10.00%	50V
C550	1-106-220-00	MYLAR	0.1UF	10.00%	100V
C551	1-126-960-11	ELECT	1UF	20.00%	50V
C552	1-162-116-00	CERAMIC	680PF	10.00%	2KV
C553	1-162-116-00	CERAMIC	680PF	10.00%	2KV
C554	1-107-364-11	MYLAR (KV-XA25M80A)	0.01UF	10.00%	200V
C554	1-137-417-11	MYLAR (KV-XA29M80A)	0.0047UF	10.00%	200V

REF NO.	PART NO.	DESCRIPTION		REMARK	
C556	1-126-941-11	ELECT	470UF	20.00%	25V
C557	1-126-941-11	ELECT	470UF	20.00%	25V
C558	1-123-024-21	ELECT	33UF		160V
C560	1-102-228-00	CERAMIC	470PF	10.00%	500V
C561	1-129-708-91	FILM (KV-XA25M80A)	0.0033UF	5.00%	630V
C561	1-129-898-00	FILM (KV-XA29M80A)	0.0022UF	5.00%	630V
C562	1-102-228-00	CERAMIC	470PF	10.00%	500V
C564	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C565	1-107-655-11	ELECT	47UF	20.00%	250V
C566	1-102-244-00	CERAMIC	220PF	10.00%	500V
C567	1-115-520-11	FILM	0.68UF	5.00%	250V
C568	1-102-228-00	CERAMIC	470PF	10.00%	500V
C570	1-115-521-11	FILM (KV-XA25M80A)	0.82UF	5.00%	250V
C570	1-115-522-11	FILM (KV-XA29M80A)	1UF	5.00%	250V
C572	1-107-846-11	FILM (KV-XA25M80A)	0.1UF	5.00%	250V
C572	1-117-661-21	FILM (KV-XA29M80A)	0.15UF	5.00%	250V
C573	1-106-379-12	MYLAR (KV-XA25M80A)	0.033UF	10.00%	200V
C573	1-106-387-00	MYLAR (KV-XA29M80A)	0.068UF	10.00%	200V
C574	1-107-636-11	ELECT (KV-XA25M80A)	10UF	20.00%	160V
C574	1-104-709-11	ELECT (KV-XA29M80A)	4.7UF		160V
C576	1-130-495-00	MYLAR	0.1UF	5.00%	50V
C577	1-106-395-00	MYLAR	0.15UF	10.00%	200V
C582	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C584	1-162-927-11	CERAMIC CHIP (KV-XA29M80A ONLY)	100PF	5.00%	50V
C586	1-216-295-91	SHORT CHIP	0 (KV-XA25M80A)		
C586	1-162-927-11	CERAMIC CHIP (KV-XA29M80A)	100PF	5.00%	50V
C600	⚠ 1-115-165-11	MYLAR	0.1UF	20.00%	250V
C602	⚠ 1-115-165-11	MYLAR	0.1UF	20.00%	250V
C603	1-126-947-11	ELECT	47UF	20.00%	25V
C604	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C605	⚠ 1-119-886-51	CERAMIC	470PF	10.00%	250V
C606	⚠ 1-119-886-51	CERAMIC	470PF	10.00%	250V
C607	1-161-830-00	CERAMIC	0.0047UF	99%	500V
C608	1-161-830-00	CERAMIC	0.0047UF	99%	500V
C609	1-126-968-11	ELECT	100UF	20.00%	50V
C610	1-126-964-11	ELECT	10UF	20.00%	50V
C611	1-161-830-00	CERAMIC	0.0047UF	99%	500V
C612	1-161-830-00	CERAMIC	0.0047UF	99%	500V
C613	1-125-906-11	ELECT	560UF	20.00%	450V
C614	1-126-964-11	ELECT	10UF	20.00%	50V
C615	⚠ 1-119-886-51	CERAMIC	470PF	10.00%	250V
C616	1-130-202-00	FILM	0.022UF	5.00%	400V
C617	1-107-792-11	CERAMIC	100PF	5.00%	1KV
C618	1-125-893-11	FILM	680PF	3.00%	1.5KV
C619	⚠ 1-119-886-51	CERAMIC	470PF	10.00%	250V
C620	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C621	1-102-114-00	CERAMIC	470PF	10.00%	50V
C622	1-102-074-00	CERAMIC	0.001UF	10.00%	50V
C623	1-104-665-11	ELECT	100UF	20.00%	25V
C624	1-125-772-91	CERAMIC	1500PF	10.00%	2KV

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REF NO.		PART NO.	DESCRIPTION			REMARK
C625		1-102-002-00	CERAMIC	680PF	10.00%	500V
C626		1-102-002-00	CERAMIC	680PF	10.00%	500V
C628		1-126-942-61	ELECT	1000UF	20.00%	25V
C629		1-126-964-11	ELECT	10UF	20.00%	50V
C630		1-125-494-11	ELECT(BLOCK)	560UF	20.00%	160V
C632		1-128-339-11	ELECT	2200UF	20.00%	16V
C633		1-104-999-11	MYLAR	0.1UF	10.00%	200V
C634		1-126-933-11	ELECT	100UF	20.00%	16V
C635		1-104-665-11	ELECT	100UF	20.00%	10V
C636		1-104-760-11	CERAMIC CHIP	0.047UF	10.00%	50V
C641		1-102-002-00	CERAMIC	680PF	10.00%	500V
C642		1-126-943-11	ELECT	2200UF	20.00%	25V
C643		1-104-665-11	ELECT	100UF	20.00%	10V
C644		1-104-331-11	CERAMIC	0.0022UF	10.00%	1KV
C645		1-137-605-11	MYLAR	0.01UF	10.00%	250V
C646		1-107-679-91	ELECT	10UF	20.00%	450V
C647		1-163-275-11	CERAMIC CHIP	0.001UF	5.00%	50V
C649		1-126-940-11	ELECT	330UF	20.00%	25V
C650		1-163-275-11	CERAMIC CHIP	0.001UF	5.00%	50V
C651		1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C652		1-126-965-91	ELECT	22UF	20.00%	50V
C653		1-126-947-11	ELECT	47UF	20.00%	25V
C655	⚠	1-119-886-51	CERAMIC	470PF	10.00%	250V
C657		1-101-821-00	CERAMIC	0.0022UF		500V
C901		1-136-153-00	FILM	0.01UF	5.00%	50V
C902		1-136-153-00	FILM	0.01UF	5.00%	50V
C912		1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C913		1-104-665-11	ELECT	100UF	20.00%	10V

<CONNECTOR>

CN102	*	1-564-507-11	PLUG, CONNECTOR 4P
CN104		1-695-915-11	TAB (CONTACT)
CN106	*	1-564-506-11	PLUG, CONNECTOR 3P
CN202	*	1-508-847-00	PIN, CONNECTOR 4P
CN205	*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P
CN305	*	1-564-509-11	PLUG, CONNECTOR 6P
CN501	*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P
CN502	*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P
CN503	*	1-564-510-11	PLUG, CONNECTOR 7P (KV-XA29M80A ONLY)
CN504		1-695-915-11	TAB (CONTACT) (KV-XA29M80A ONLY)
CN505	*	1-564-508-11	PLUG, CONNECTOR 5P
CN507	*	1-564-509-11	PLUG, CONNECTOR 6P
CN508		1-695-915-11	TAB (CONTACT) (KV-XA25M80A ONLY)
CN601		1-580-843-11	PIN, CONNECTOR (POWER)
CN602	*	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P
CN603	*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P (KV-XA29M80A ONLY)
CN604	*	1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P (KV-XA25M80A)
CN604	*	1-691-134-11	PIN, CONNECTOR (PC BOARD) 2P (KV-XA29M80A)
CN901	*	1-564-509-11	PLUG, CONNECTOR 6P
CN904	*	1-564-512-11	PLUG, CONNECTOR 9P

<DIODE>

D001		8-719-988-61	1SS355TE-17
D005		8-719-988-61	1SS355TE-17
D006		8-719-988-61	1SS355TE-17
D203		8-719-820-41	1SS302
D300		1-216-295-91	SHORT CHIP 0
D301		8-719-988-61	1SS355TE-17
D306		8-719-988-61	1SS355TE-17
D307		8-719-988-61	1SS355TE-17
D308		8-719-988-61	1SS355TE-17
D309		8-719-159-10	RD5.1SB-T2
D311		8-719-988-61	1SS355TE-17
D312		8-719-988-61	1SS355TE-17
D313		8-719-988-61	1SS355TE-17
D314		8-719-988-61	1SS355TE-17
D315		8-719-988-61	1SS355TE-17
D316		8-719-037-06	RD7.5SB1-T1
D320		8-719-158-35	RD9.1S-B
D321		8-719-158-35	RD9.1S-B
D504		8-719-302-43	EL1Z
D505		8-719-988-61	1SS355TE-17
D506		8-719-911-19	1SS119-25
D507		8-719-988-61	1SS355TE-17
D508		8-719-988-61	1SS355TE-17
D509		1-216-073-91	RES-CHIP 10K 5% 1/10W
D510		8-719-988-61	1SS355TE-17
D511		8-719-988-61	1SS355TE-17
D512		8-719-988-61	1SS355TE-17
D513		8-719-908-03	GP08D
D517		8-719-312-71	RS3FS
D518		8-719-074-35	RU4AM-T4
D519		8-719-312-71	RS3FS
D521		8-719-302-43	EL1Z
D522		8-719-302-43	EL1Z (KV-XA25M80A)
D522		8-719-028-45	D2L20U (KV-XA29M80A)
D523		8-719-302-43	EL1Z
D527		8-719-908-03	GP08D
D528		8-719-908-03	GP08D
D531		8-719-988-61	1SS355TE-17
D532		8-719-988-61	1SS355TE-17
D534		1-216-295-91	SHORT CHIP 0 (KV-XA25M80A)
D534		8-719-988-61	1SS355TE-17 (KV-XA29M80A)
D600		8-719-911-19	1SS119-25
D602		8-719-911-19	1SS119-25
D603		8-719-150-92	RD33EB3T
D604		8-719-028-72	RGP02-17EL-6433
D605		8-719-510-22	D3SB60
D606		8-719-108-18	5P-6M
D607		8-719-988-61	1SS355TE-17
D608		8-719-110-53	RD20ES-B2
D609		8-719-311-31	RU-1P
D610		8-719-043-76	AK04V0
D611		8-719-046-74	AU-01Z-V1
D613		8-719-046-74	AU-01Z-V1
D614		8-719-046-74	AU-01Z-V1
D615		8-719-074-35	RU4AM-T4 (KV-XA29M80A ONLY)
D616		8-719-067-18	RN4Z
D617		8-719-073-84	31DQ06-FC5
D620		8-719-110-72	RD30ESB2
D622		8-719-177-49	DIODE FMU-G26S (KV-XA25M80A ONLY)
D623		8-719-082-03	DIODE MM3Z15VT1
D624		8-719-988-61	1SS355TE-17
D625		8-719-158-39	RD10S-B
D627		8-719-073-84	31DQ06-FC5
D628		8-719-911-19	1SS119-25
D631		8-719-068-00	ERC04-06SE
D632		8-719-068-00	ERC04-06SE
D633		8-719-948-45	ERA22-08

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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REF NO.	PART NO.	DESCRIPTION	REMARK
D634	8-719-988-61	1SS355TE-17	
D635	8-719-988-61	1SS355TE-17	
D636	8-719-510-02	D1NS4	
D637	8-719-109-96	RD6.8ES-B1	
D638	8-719-510-48	D1N20R	
		<CONNECTOR>	
DY1	* 1-580-798-11	CONNECTOR PIN (DY) 6P	
		<FERRITE BEAD>	
FB300	1-410-397-21	FERRITE 1.1UH	
FB501	1-410-397-21	FERRITE 1.1UH	
FB502	1-410-397-21	FERRITE 1.1UH	
FB600	1-410-397-21	FERRITE 1.1UH	
FB601	1-410-397-21	FERRITE 1.1UH	
FB602	1-410-397-21	FERRITE 1.1UH	
FB603	1-410-397-21	FERRITE 1.1UH	
FB604	1-412-911-31	FERRITE 0UH	
FB605	1-406-656-21	INDUCTOR 3.3UH	
FB606	1-412-911-31	FERRITE 0UH	
FB608	1-412-911-31	FERRITE 0UH	
FB611	1-410-397-21	FERRITE 1.1UH	
FB612	1-410-397-21	FERRITE 1.1UH	
FB613	1-410-397-21	FERRITE 1.1UH	
FB615	1-412-911-31	FERRITE 0UH	
		<IC>	
IC001	8-752-929-29	IC CXP86461-638S	
IC002	8-759-371-21	MM1319AFBE	
IC003	8-759-672-78	M24C08-BN6(A)	
IC201	8-759-336-30	TA8223K	
IC301	8-752-095-72	CXA2159S	
IC302	8-759-666-90	IC TDA9181T	
IC502	8-759-700-07	NJM2903M	
IC503	8-759-980-58	TDA8172	
IC601	8-749-019-09	IC STR-F6456S	
IC602	8-749-920-61	SE-135N	
IC603	8-759-701-59	NJM78M09FA	
IC604	8-759-231-53	TA7805S	
		<CHIP CONDUCTOR>	
JR001	1-216-295-91	SHORT CHIP 0	
JR002	1-216-295-91	SHORT CHIP 0	
JR003	1-216-295-91	SHORT CHIP 0	
JR004	1-216-295-91	SHORT CHIP 0	
JR006	1-216-295-91	SHORT CHIP 0	
JR007	1-216-295-91	SHORT CHIP 0	
JR008	1-216-295-91	SHORT CHIP 0	
JR010	1-216-295-91	SHORT CHIP 0	
JR012	1-216-295-91	SHORT CHIP 0	
JR014	1-216-295-91	SHORT CHIP 0	
JR015	1-216-295-91	SHORT CHIP 0	
JR016	1-216-295-91	SHORT CHIP 0	
JR019	1-216-295-91	SHORT CHIP 0	
JR020	1-216-295-91	SHORT CHIP 0	
JR022	1-216-295-91	SHORT CHIP 0	
JR023	1-216-295-91	SHORT CHIP 0	
JR024	1-216-295-91	SHORT CHIP 0	

REF NO.	PART NO.	DESCRIPTION	REMARK
JR025	1-216-295-91	SHORT CHIP 0	
JR028	1-216-295-91	SHORT CHIP 0	
JR030	1-216-295-91	SHORT CHIP 0	
JR031	1-216-295-91	SHORT CHIP 0	
JR102	1-216-295-91	SHORT CHIP 0	
JR109	1-216-295-91	SHORT CHIP 0	
JR202	1-216-295-91	SHORT CHIP 0	
JR204	1-216-295-91	SHORT CHIP 0	
JR214	1-216-295-91	SHORT CHIP 0	(KV-XA29M80A ONLY)
JR300	1-216-295-91	SHORT CHIP 0	
JR304	1-216-295-91	SHORT CHIP 0	
JR308	1-216-295-91	SHORT CHIP 0	
JR311	1-216-295-91	SHORT CHIP 0	
JR312	1-216-295-91	SHORT CHIP 0	
JR400	1-216-295-91	SHORT CHIP 0	
JR500	1-216-295-91	SHORT CHIP 0	
JR501	1-216-295-91	SHORT CHIP 0	
JR502	1-216-295-91	SHORT CHIP 0	(KV-XA29M80A ONLY)
JR503	1-216-295-91	SHORT CHIP 0	
JR505	1-216-295-91	SHORT CHIP 0	
JR600	1-216-295-91	SHORT CHIP 0	
		<COIL>	
L002	1-414-856-11	INDUCTOR 10UH	
L003	1-414-180-11	INDUCTOR 3.3UH	
L005	1-414-233-22	FERRITE 0UH	
L101	1-414-856-11	INDUCTOR 10UH	
L102	1-414-856-11	INDUCTOR 10UH	
L103	1-414-856-11	INDUCTOR 10UH	
L104	1-414-856-11	INDUCTOR 10UH	
L105	1-414-856-11	INDUCTOR 10UH	
L301	1-414-189-31	INDUCTOR 100UH	
L302	1-414-185-41	INDUCTOR 22UH	
L303	1-414-189-31	INDUCTOR 100UH	
L304	1-414-189-31	INDUCTOR 100UH	
L501	1-412-525-31	INDUCTOR 10UH	
L502	1-422-613-11	COIL, AIR CORE	
L503	1-412-525-31	INDUCTOR 10UH	
L504	1-412-525-31	INDUCTOR 10UH	
L507	1-459-111-00	INDUCTOR 10MH	(KV-XA25M80A)
L507	1-416-931-11	INDUCTOR 0UH	(KV-XA29M80A)
L511	1-406-978-11	INDUCTOR 150UH	(KV-XA25M80A)
L511	1-406-977-71	INDUCTOR 0UH	(KV-XA29M80A)
L512	1-412-549-31	INDUCTOR 1MH	(KV-XA25M80A ONLY)
L513	1-412-549-31	INDUCTOR 1MH	(KV-XA25M80A)
L513	1-412-551-31	INDUCTOR 1.5MH	(KV-XA29M80A)
L515	1-459-104-00	COIL, WITH CORE	(KV-XA25M80A)
L515	1-459-104-00	COIL, CHOKE 10MMH	(KV-XA29M80A)
L518	1-414-187-11	INDUCTOR 47UH	
L601	1-406-663-21	INDUCTOR 47UH	
L901	1-408-603-31	INDUCTOR 10UH	
L902	1-408-603-31	INDUCTOR 10UH	
L905	1-414-856-11	INDUCTOR 10UH	
		<PHOTO COUPLER>	
PH600	⚠ 8-749-924-35	ON3171-R	

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REF NO.	PART NO.	DESCRIPTION	REMARK
		<IC LINK>	
PS200	1-532-675-21	LINK, IC 1.5A/150V (KV-XA25M80A)	
PS200	1-532-686-21	LINK, IC 2.7A/150V (KV-XA29M80A)	
PS600	1-533-597-41	LINK, IC	
PS601	1-533-597-41	LINK, IC	
		<TRANSISTOR>	
Q002	8-729-010-25	MSD601-RT1	
Q005	8-729-027-24	DTA114TKA-T146 (KV-XA25M80A ONLY)	
Q101	8-729-010-25	MSD601-RT1	
Q201	8-729-424-67	UN2216	
Q202	8-729-424-67	UN2216	
Q205	8-729-421-19	UN2213	
Q206	8-729-421-19	UN2213	
Q207	8-729-421-19	UN2213	
Q301	8-729-216-22	2SA1162-G	
Q302	8-729-010-25	MSD601-RT1	
Q303	8-729-216-22	2SA1162-G	
Q305	8-729-216-22	2SA1162-G	
Q306	8-729-010-25	MSD601-RT1	
Q307	8-729-010-25	MSD601-RT1	
Q308	8-729-216-22	2SA1162-G	
Q309	8-729-421-19	UN2213	
Q312	8-729-216-22	2SA1162-G	
Q313	8-729-010-25	MSD601-RT1	
Q314	8-729-216-22	2SA1162-G	
Q315	8-729-421-19	UN2213	
Q501	8-729-216-22	2SA1162-G (KV-XA29M80A ONLY)	
Q502	8-729-216-22	2SA1162-G (KV-XA29M80A ONLY)	
Q503	8-729-010-25	MSD601-RT1	
Q505	8-729-931-45	IRF614	
Q506	8-729-119-80	2SC2688-LK	
Q507	8-729-216-22	2SA1162-G	
Q509	8-729-010-25	MSD601-RT1	
Q511	8-729-048-07	2SD2578-CA	
Q600	8-729-119-78	2SC2785-HFE	
Q601	8-729-023-22	2SD2114K	
Q602	8-729-010-25	MSD601-RT1	
Q603	8-729-424-08	UN2111	
Q604	8-729-200-17	2SA1091-O	
Q605	8-729-044-30	2SK2845-LB102	
Q606	8-729-010-25	MSD601-RT1	
Q607	8-729-823-22	2SC3576	
Q608	8-729-010-25	MSD601-RT1	
		<RESISTOR>	
R001	1-414-233-22	FERRITE 0UH	
R002	1-216-025-11	RES-CHIP 100 5%	1/10W
R003	1-216-073-91	RES-CHIP 10K 5%	1/10W
R004	1-216-025-11	RES-CHIP 100 5%	1/10W
R005	1-216-025-11	RES-CHIP 100 5%	1/10W
R008	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R010	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R011	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R012	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R013	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R014	1-216-025-11	RES-CHIP 100 5%	1/10W
R015	1-216-025-11	RES-CHIP 100 5%	1/10W
R017	1-216-049-11	RES-CHIP 1K 5%	1/10W

REF NO.	PART NO.	DESCRIPTION	REMARK
R018	1-216-033-00	RES-CHIP 220 5%	1/10W
R019	1-216-073-91	RES-CHIP 10K 5%	1/10W
R020	1-216-045-00	RES-CHIP 680 5%	1/10W
R021	1-216-073-91	RES-CHIP 10K 5%	1/10W
R022	1-216-025-11	RES-CHIP 100 5%	1/10W
R024	1-216-063-91	RES-CHIP 3.9K 5%	1/10W
R025	1-216-063-91	RES-CHIP 3.9K 5%	1/10W
R026	1-216-063-91	RES-CHIP 3.9K 5%	1/10W
R027	1-216-073-91	RES-CHIP 10K 5%	1/10W
R029	1-216-049-11	RES-CHIP 1K 5%	1/10W
R031	1-216-049-11	RES-CHIP 1K 5%	1/10W
R032	1-216-295-91	SHORT CHIP 0	
R034	1-216-049-11	RES-CHIP 1K 5%	1/10W
R035	1-216-025-11	RES-CHIP 100 5%	1/10W
R036	1-216-025-11	RES-CHIP 100 5%	1/10W
R037	1-216-025-11	RES-CHIP 100 5%	1/10W
R038	1-216-049-11	RES-CHIP 1K 5%	1/10W
R040	1-216-025-11	RES-CHIP 100 5%	1/10W
R041	1-216-025-11	RES-CHIP 100 5%	1/10W
R042	1-216-295-91	SHORT CHIP 0	
R043	1-216-049-11	RES-CHIP 1K 5%	1/10W
R044	1-216-025-11	RES-CHIP 100 5%	1/10W
R045	1-414-233-22	FERRITE 0UH	
R046	1-216-049-11	RES-CHIP 1K 5%	1/10W
R047	1-414-233-22	FERRITE 0UH	
R048	1-216-073-91	RES-CHIP 10K 5%	1/10W
R050	1-216-073-91	RES-CHIP 10K 5%	1/10W
R053	1-216-049-11	RES-CHIP 1K 5%	1/10W
R058	1-216-295-91	SHORT CHIP 0	
R059	1-216-295-91	SHORT CHIP 0	
R060	1-216-295-91	SHORT CHIP 0	
R061	1-216-033-00	RES-CHIP 220 5%	1/10W
R062	1-216-041-00	RES-CHIP 470 5%	1/10W
R063	1-216-041-00	RES-CHIP 470 5%	1/10W
R064	1-216-041-00	RES-CHIP 470 5%	1/10W
R065	1-216-041-00	RES-CHIP 470 5%	1/10W
R066	1-216-049-11	RES-CHIP 1K 5%	1/10W
R067	1-216-049-11	RES-CHIP 1K 5%	1/10W
R068	1-216-041-00	RES-CHIP 470 5%	1/10W
R105	1-216-295-91	SHORT CHIP 0	
R109	1-216-041-00	RES-CHIP 470 5%	1/10W
R111	1-216-025-11	RES-CHIP 100 5%	1/10W
R112	1-216-025-11	RES-CHIP 100 5%	1/10W
R113	1-216-047-91	RES-CHIP 820 5%	1/10W
R202	1-216-059-00	RES-CHIP 2.7K 5%	1/10W
R203	1-216-049-11	RES-CHIP 1K 5%	1/10W
R204	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R205	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R206	1-216-049-11	RES-CHIP 1K 5%	1/10W
R207	1-216-059-00	RES-CHIP 2.7K 5%	1/10W
R208	1-216-053-00	RES-CHIP 1.5K 5%	1/10W
R209	1-216-053-00	RES-CHIP 1.5K 5%	1/10W
R210	1-216-027-00	RES-CHIP 120 5%	1/10W
R212	1-216-027-00	RES-CHIP 120 5%	1/10W
R225	1-216-033-00	RES-CHIP 220 5%	1/10W
R226	1-216-033-00	RES-CHIP 220 5%	1/10W
R227	1-216-033-00	RES-CHIP 220 5%	1/10W
R228	1-249-389-11	CARBON 4.7 5%	1/4W
R229	1-216-073-91	RES-CHIP 10K 5%	1/10W
R230	1-216-073-91	RES-CHIP 10K 5%	1/10W
R231	1-216-295-91	SHORT CHIP 0	
R234	1-249-389-11	CARBON 4.7 5%	1/4W

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REF NO.	PART NO.	DESCRIPTION		REMARK	
R237	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R301	1-216-073-91	RES-CHIP	10K	5%	1/10W
R302	1-216-295-91	SHORT CHIP	0		
R303	1-216-049-11	RES-CHIP	1K	5%	1/10W
R304	1-216-073-91	RES-CHIP	10K	5%	1/10W
R305	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R308	1-216-025-11	RES-CHIP	100	5%	1/10W
R309	1-216-025-11	RES-CHIP	100	5%	1/10W
R310	1-216-025-11	RES-CHIP	100	5%	1/10W
R311	1-216-041-00	RES-CHIP	470	5%	1/10W
R312	1-216-039-00	RES-CHIP	390	5%	1/10W
R313	1-216-037-00	RES-CHIP	330	5%	1/10W
R314	1-216-083-00	RES-CHIP	27K	5%	1/10W
R316	1-216-037-00	RES-CHIP	330	5%	1/10W
R317	1-216-091-00	RES-CHIP	56K	5%	1/10W
R318	1-216-039-00	RES-CHIP	390	5%	1/10W
R319	1-216-025-11	RES-CHIP	100	5%	1/10W
R320	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R321	1-216-073-91	RES-CHIP	10K	5%	1/10W
R322	1-216-033-00	RES-CHIP	220	5%	1/10W
R325	1-216-041-00	RES-CHIP	470	5%	1/10W
R326	1-216-295-91	SHORT CHIP	0		
R331	1-216-295-91	SHORT CHIP	0		
R332	1-216-033-00	RES-CHIP	220	5%	1/10W
R335	1-216-045-00	RES-CHIP	680	5%	1/10W
R338	1-216-037-00	RES-CHIP	330	5%	1/10W
R340	1-216-025-11	RES-CHIP	100	5%	1/10W
R345	1-216-081-00	RES-CHIP	22K	5%	1/10W
R348	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R349	1-216-073-91	RES-CHIP	10K	5%	1/10W
R350	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R351	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R354	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R355	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R356	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R357	1-216-079-00	RES-CHIP	18K	5%	1/10W
R358	1-216-049-11	RES-CHIP	1K	5%	1/10W
R359	1-216-033-00	RES-CHIP	220	5%	1/10W
R360	1-216-033-00	RES-CHIP	220	5%	1/10W
R361	1-216-073-91	RES-CHIP	10K	5%	1/10W
R362	1-216-075-00	RES-CHIP	12K	5%	1/10W
R363	1-216-079-00	RES-CHIP	18K	5%	1/10W
R364	1-216-295-91	SHORT CHIP	0		
R365	1-216-033-00	RES-CHIP	220	5%	1/10W
R366	1-216-073-91	RES-CHIP	10K	5%	1/10W
R367	1-216-073-91	RES-CHIP	10K	5%	1/10W
R368	1-216-073-91	RES-CHIP	10K	5%	1/10W
R370	1-216-033-00	RES-CHIP	220	5%	1/10W
R371	1-216-083-00	RES-CHIP	27K	5%	1/10W
R372	1-216-091-00	RES-CHIP	56K	5%	1/10W
R376	1-216-081-00	RES-CHIP	22K	5%	1/10W
R377	1-216-121-11	RES-CHIP	1M	5%	1/10W
R378	1-216-041-00	RES-CHIP	470	5%	1/10W
R379	1-218-179-11	RES-CHIP	10M	5%	1/10W
R380	1-216-041-00	RES-CHIP	470	5%	1/10W
R382	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R383	1-216-049-11	RES-CHIP	1K	5%	1/10W
R384	1-216-295-91	SHORT CHIP	0		
R385	1-216-033-00	RES-CHIP	220	5%	1/10W
R391	1-216-049-11	RES-CHIP	1K	5%	1/10W
R500	1-249-417-11	CARBON	1K	5%	1/4W
R501	1-216-049-11	RES-CHIP	1K	5%	1/10W

REF NO.	PART NO.	DESCRIPTION		REMARK	
R505	1-218-756-11	METAL CHIP (KV-XA25M80A)	150K	0.5%	1/10W
R505	1-216-699-91	METAL CHIP (KV-XA29M80A)	100K	0.5%	1/10W
R506	1-216-685-11	METAL CHIP (KV-XA25M80A)	27K	0.5%	1/10W
R506	1-216-081-00	RES-CHIP (KV-XA29M80A)	22K	5%	1/10W
R507	1-249-389-11	CARBON	4.7	5%	1/4W
R508	1-216-473-11	METAL OXIDE (KV-XA25M80A)	56	5%	3W
R508	1-216-471-11	METAL OXIDE (KV-XA29M80A)	27	5%	3W
R509	1-216-475-11	METAL OXIDE (KV-XA25M80A)	120	5%	3W
R509	1-216-473-11	METAL OXIDE (KV-XA29M80A)	56	5%	3W
R510	1-215-884-11	METAL OXIDE (KV-XA25M80A)	47	5%	2W
R510	1-216-449-11	METAL OXIDE (KV-XA29M80A)	56	5%	2W
R511	1-215-910-00	METAL OXIDE (KV-XA25M80A)	68	5%	3W
R511	1-215-908-00	METAL OXIDE (KV-XA29M80A)	33	5%	3W
R515	1-215-913-11	METAL OXIDE (KV-XA25M80A)	220	5%	3W
R515	1-215-911-11	METAL OXIDE (KV-XA29M80A)	100	5%	3W
R516	1-216-081-00	RES-CHIP (KV-XA25M80A ONLY)	22K	5%	1/10W
R517	1-208-798-11	METAL CHIP (KV-XA29M80A ONLY)	4.7K	0.5%	1/10W
R518	1-247-807-31	CARBON	100	5%	1/4W
R519	1-215-913-11	METAL OXIDE	220	5%	3W
R520	1-249-429-11	CARBON	10K	5%	1/4W
R522	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R523	1-249-411-11	CARBON	330	5%	1/4W
R525	1-208-846-11	METAL CHIP (KV-XA29M80A ONLY)	470K	0.5%	1/10W
R526	1-208-804-11	METAL CHIP	8.2K	0.5%	1/10W
R527	1-216-001-00	RES-CHIP	10	5%	1/10W
R528	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R529	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R531	1-247-843-11	CARBON	3.3K	5%	1/4W
R533	1-249-417-11	CARBON	1K	5%	1/4W
R534	1-216-361-00	METAL OXIDE (KV-XA25M80A)	0.22	5%	2W
R534	1-216-364-11	METAL OXIDE (KV-XA29M80A)	0.39	5%	2W
R535	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R536	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R537	1-208-802-11	METAL CHIP (KV-XA25M80A)	6.8K	0.5%	1/10W
R537	1-208-804-11	METAL CHIP (KV-XA29M80A)	8.2K	0.5%	1/10W
R539	1-216-049-11	RES-CHIP (KV-XA29M80A ONLY)	1K	5%	1/10W
R540	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R541	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R542	1-216-295-91	SHORT CHIP	0 (KV-XA25M80A)		
R542	1-216-073-91	RES-CHIP (KV-XA29M80A)	10K	5%	1/10W
R543	1-216-437-00	METAL OXIDE	5.6K	5%	1W
R544	1-215-917-11	METAL OXIDE	1K	5%	3W
R545	1-216-077-91	RES-CHIP	15K	5%	1/10W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF NO.	PART NO.	DESCRIPTION		REMARK	
R546	1-216-077-91	RES-CHIP	15K	5%	1/10W
R547	1-216-085-91	RES-CHIP	33K	5%	1/10W
R548	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
		(KV-XA29M80A ONLY)			
R549	1-215-453-00	METAL	22K	1%	1/4W
		(KV-XA25M80A)			
R549	1-215-452-00	METAL	20K	1%	1/4W
		(KV-XA29M80A)			
R550	1-216-097-11	RES-CHIP	100K	5%	1/10W
R551	1-249-421-11	CARBON	2.2K	5%	1/4W
		(KV-XA25M80A)			
R551	1-249-441-11	CARBON	100K	5%	1/4W
		(KV-XA29M80A)			
R552	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R553	1-215-453-00	METAL	22K	1%	1/4W
R554	1-215-457-00	METAL	33K	1%	1/4W
		(KV-XA25M80A)			
R554	1-215-453-00	METAL	22K	1%	1/4W
		(KV-XA29M80A)			
R556	1-215-437-00	METAL	4.7K	1%	1/4W
R558	1-247-843-11	CARBON	3.3K	5%	1/4W
R559	1-249-429-11	CARBON	10K	5%	1/4W
R560	1-216-073-91	RES-CHIP	10K	5%	1/10W
R561	1-216-049-11	RES-CHIP	1K	5%	1/10W
		(KV-XA29M80A ONLY)			
R562	1-249-401-11	CARBON	47	5%	1/4W
R564	1-208-820-11	METAL CHIP	39K	0.5%	1/10W
		(KV-XA29M80A ONLY)			
R565	1-216-073-91	RES-CHIP	10K	5%	1/10W
R567	1-216-105-91	RES-CHIP	220K	5%	1/10W
R568	1-249-383-11	CARBON	1.5	5%	1/4W
R570	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R571	1-215-443-00	METAL	8.2K	1%	1/4W
R573	1-216-089-91	RES-CHIP	47K	5%	1/10W
		(KV-XA25M80A)			
R573	1-216-083-00	RES-CHIP	27K	5%	1/10W
		(KV-XA29M80A)			
R574	1-216-113-00	RES-CHIP	470K	5%	1/10W
		(KV-XA25M80A ONLY)			
R575	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
		(KV-XA29M80A ONLY)			
R577	1-215-913-11	METAL OXIDE	220	5%	3W
R578	1-216-369-00	METAL OXIDE	1	5%	2W
R579	1-216-097-11	RES-CHIP	100K	5%	1/10W
		(KV-XA25M80A)			
R579	1-216-295-91	SHORT CHIP	0 (KV-XA29M80A)		
R580	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R581	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R582	1-208-842-11	METAL CHIP	330K	0.5%	1/10W
		(KV-XA29M80A ONLY)			
R583	1-216-109-00	RES-CHIP	330K	5%	1/10W
		(KV-XA25M80A ONLY)			
R584	1-216-295-91	SHORT CHIP	0 (KV-XA25M80A)		
R584	1-218-760-11	METAL CHIP	220K	0.5%	1/10W
		(KV-XA29M80A)			
R587	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
		(KV-XA29M80A ONLY)			
R588	1-215-888-00	METAL OXIDE	220	5%	2W
R589	1-215-888-00	METAL OXIDE	220	5%	2W
R590	1-215-465-00	METAL	68K	1%	1/4W
R591	1-260-288-11	CARBON	0.47	5%	1/2W
R592	1-208-820-11	METAL CHIP	39K	0.5%	1/10W
		(KV-XA29M80A ONLY)			
R593	1-260-288-11	CARBON	0.47	5%	1/2W

REF NO.	PART NO.	DESCRIPTION		REMARK	
R594	1-260-288-11	CARBON	0.47	5%	1/2W
R595	1-216-073-91	RES-CHIP	10K	5%	1/10W
		(KV-XA29M80A ONLY)			
R596	1-215-917-11	METAL OXIDE	1K	5%	3W
		(KV-XA25M80A)			
R596	1-215-916-00	METAL OXIDE	680	5%	3W
		(KV-XA29M80A)			
R597	1-247-750-11	CARBON	680	5%	1/2W
R598	1-249-438-11	CARBON	56K	5%	1/4W
R599	1-249-389-11	CARBON	4.7	5%	1/4W
R600	1-249-438-11	CARBON	56K	5%	1/4W
R601	1-249-419-11	CARBON	1.5K	5%	1/4W
		(KV-XA25M80A)			
R601	1-249-420-11	CARBON	1.8K	5%	1/4W
		(KV-XA29M80A)			
R602	1-249-389-11	CARBON	4.7	5%	1/4W
R603	1-215-485-00	METAL	470K	1%	1/4W
R604	1-216-097-11	RES-CHIP	100K	5%	1/10W
R607	1-249-425-11	CARBON	4.7K	5%	1/4W
R608	1-240-205-91	CARBON	22M	5%	1/2W
R609	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R610	1-216-073-91	RES-CHIP	10K	5%	1/10W
R611	1-216-089-91	RES-CHIP	47K	5%	1/10W
R612	1-216-045-00	RES-CHIP	680	5%	1/10W
R614	1-216-041-00	RES-CHIP	470	5%	1/10W
R615	1-216-369-00	METAL OXIDE	1	5%	2W
R616	1-260-302-51	CARBON	6.8	5%	1/2W
R617	1-247-791-91	CARBON	22	5%	1/4W
R619	1-260-128-11	CARBON	270K	5%	1/2W
R620	1-129-720-00	FILM	0.033UF	5.00%	630V
R621	1-215-864-00	METAL OXIDE	150	5%	1W
R623	1-216-095-00	RES-CHIP	82K	5%	1/10W
R624	1-216-089-91	RES-CHIP	47K	5%	1/10W
R626	1-216-049-11	RES-CHIP	1K	5%	1/10W
R627	1-240-251-11	CEMENTED	6.8	5%	10W
R629	1-247-747-11	CARBON	470	5%	1/2W
R630	1-249-429-11	CARBON	10K	5%	1/4W
R631	1-216-089-91	RES-CHIP	47K	5%	1/10W
R632	1-220-886-11	FUSIBLE	0.1	10%	1W
R634	⚠ 1-240-917-91	METAL	8.2M	5%	1W
R635	1-216-492-21	METAL OXIDE	82K	5%	3W
R636	1-215-924-00	METAL OXIDE	15K	5%	3W
R637	1-216-492-21	METAL OXIDE	82K	5%	3W
R639	1-216-361-21	METAL OXIDE	0.22	5%	2W
R640	1-249-415-11	CARBON	680	5%	1/4W
R641	1-216-361-21	METAL OXIDE	0.22	5%	2W
R642	1-249-419-11	CARBON	1.5K	5%	1/4W
R643	1-247-843-11	CARBON	3.3K	5%	1/4W
R644	1-249-419-11	CARBON	1.5K	5%	1/4W
R646	1-215-924-00	METAL OXIDE	15K	5%	3W
R647	1-249-387-11	CARBON	3.3	5%	1/4W
R648	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R649	1-249-417-11	CARBON	1K	5%	1/4W
R650	1-215-882-00	METAL OXIDE	22	5%	2W
R652	1-215-900-11	METAL OXIDE	22K	5%	2W
R653	1-215-873-00	METAL OXIDE	4.7K	5%	1W
R654	1-216-369-00	METAL OXIDE	1	5%	2W
		(KV-XA25M80A ONLY)			
R656	1-249-417-11	CARBON	1K	5%	1/4W
R657	1-260-127-11	CARBON	220K	5%	1/2W
R659	1-216-049-11	RES-CHIP	1K	5%	1/10W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF NO.		PART NO.	DESCRIPTION			REMARK
R660		1-216-073-91	RES-CHIP	10K	5%	1/10W
R661		1-215-873-00	METAL OXIDE	4.7K	5%	1W
R682		1-249-377-11	CARBON	0.47	5%	1/4W
R901		1-249-411-11	CARBON	330	5%	1/4W
R902		1-249-411-11	CARBON	330	5%	1/4W
R909		1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R910		1-216-065-91	RES-CHIP	4.7K	5%	1/10W
			<RELAY>			
RY600	⚠	1-755-299-11	RELAY, AC POWER			
RY601	⚠	1-755-299-11	RELAY, AC POWER			
			<SWITCH>			
S501		1-572-707-11	SWITCH, LEVER			
S502		1-572-707-11	SWITCH, LEVER			
			<TRANSFORMER>			
T501		1-437-195-11	TRANSFORMER, HORIZONTAL DRIVE			
T503	⚠	1-453-284-11	TRANSFORMER ASSY FLY BACK (NX-4009//M314)			
T504		1-431-693-11	TRANSFORMER, HORIZONTAL LINEAR			
T505		1-426-981-11	TRANSFORMER, FERRITE (PMT)			
T601		1-424-505-11	TRANSFORMER, LINE FILTER (KV-XA25M80A)			
T601		1-424-505-11	COIL, LINE FILTER (KV-XA29M80A)			
T603	⚠	1-435-147-11	TRANSFORMER, CONVERTER (SRT)			
T604	⚠	1-431-852-11	TRANSFORMER, CONVERTER (SRT)			
			<THERMISTOR>			
TH600		1-803-586-11	THERMISTOR, NTC			
			<THERMISTOR>			
THP600		1-803-540-11	THERMISTOR			
			<TUNER>			
TU101		8-598-449-10	TUNER, FSS BTF-LG433			
			<VARISTOR>			
VDR600		1-803-830-31	VARISTOR (ERZV14D621)			
			<CRYSTAL>			
X001		1-579-125-11	VIBRATOR, CERAMIC			
X301		1-781-134-21	VIBRATOR, CRYSTAL			
X302		1-781-132-21	VIBRATOR, CRYSTAL			

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REF NO.	PART NO.	DESCRIPTION			REMARK
	* A-1300-559-A	B9 BOARD COMPLETE			
		**********			
	1-533-223-11	CLIP, FUSE			
		<CAPACITOR>			
C7227	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C7228	1-163-024-00	CERAMIC CHIP	0.018UF	10.00%	50V
C7229	1-163-018-00	CERAMIC CHIP	0.0056UF	10.00%	50V
C7230	1-163-024-00	CERAMIC CHIP	0.018UF	10.00%	50V
C7231	1-163-018-00	CERAMIC CHIP	0.0056UF	10.00%	50V
C7232	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C7233	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C7234	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C7235	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C7236	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C7238	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C7240	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C7241	1-164-346-11	CERAMIC CHIP	1UF		16V
C7242	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C7243	1-164-346-11	CERAMIC CHIP	1UF		16V
C7244	1-164-700-11	CERAMIC CHIP	0.68UF		16V
C7245	1-164-346-11	CERAMIC CHIP	1UF		16V
C7246	1-163-018-00	CERAMIC CHIP	0.0056UF	10.00%	50V
C7247	1-164-346-11	CERAMIC CHIP	1UF		16V
C7248	1-163-010-11	CERAMIC CHIP	0.0012UF	10.00%	50V
C7249	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C7250	1-164-346-11	CERAMIC CHIP	1UF		16V
C7251	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C7252	1-164-346-11	CERAMIC CHIP	1UF		16V
C7253	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C7254	1-126-965-91	ELECT	22UF	20.00%	50V
C7255	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C7258	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C7259	1-126-933-11	ELECT	100UF	20.00%	16V
C7260	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C7261	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C7263	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C7301	1-126-933-11	ELECT	100UF	20.00%	16V
C7304	1-126-967-11	ELECT	47UF	20.00%	50V
C7305	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C7333	1-126-964-11	ELECT	10UF	20.00%	50V
C7401	1-164-346-11	CERAMIC CHIP	1UF		16V
C7402	1-164-346-11	CERAMIC CHIP	1UF		16V
C7403	1-163-005-91	CERAMIC CHIP	470PF	10.00%	50V
C7404	1-163-005-91	CERAMIC CHIP	470PF	10.00%	50V
C7405	1-126-935-11	ELECT	470UF	20.00%	16V
C7406	1-164-346-11	CERAMIC CHIP	1UF		16V
C7407	1-164-346-11	CERAMIC CHIP	1UF		16V
C7408	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C7409	1-126-933-11	ELECT	100UF	20.00%	16V
C7410	1-164-346-11	CERAMIC CHIP	1UF		16V
C7411	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C7412	1-164-346-11	CERAMIC CHIP	1UF		16V
C7413	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C7414	1-126-963-11	ELECT	4.7UF	20.00%	50V
C7415	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C7416	1-164-346-11	CERAMIC CHIP	1UF		16V
C7417	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C7418	1-164-346-11	CERAMIC CHIP	1UF		16V
C7419	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V

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REF NO.	PART NO.	DESCRIPTION			REMARK
C7513	1-216-295-91	SHORT CHIP	0		
C7514	1-216-295-91	SHORT CHIP	0		
C7515	1-163-243-11	CERAMIC CHIP	47PF	5.00%	50V
C7517	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C7518	1-126-963-11	ELECT	4.7UF	20.00%	50V
C7519	1-163-249-11	CERAMIC CHIP	82PF	5.00%	50V
C7520	1-163-249-11	CERAMIC CHIP	82PF	5.00%	50V
C7522	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C7523	1-163-255-11	CERAMIC CHIP	150PF	5.00%	50V
C7524	1-163-247-91	CERAMIC CHIP	68PF	5.00%	50V
C7525	1-163-249-11	CERAMIC CHIP	82PF	5.00%	50V
C7526	1-163-249-11	CERAMIC CHIP	82PF	5.00%	50V
C7528	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C7529	1-163-255-11	CERAMIC CHIP	150PF	5.00%	50V
C7530	1-163-247-91	CERAMIC CHIP	68PF	5.00%	50V
C7543	1-126-933-11	ELECT	100UF	20.00%	16V
C7544	1-165-319-11	CERAMIC CHIP	0.1UF		50V
C7554	1-165-319-11	CERAMIC CHIP	0.1UF		50V
C7557	1-165-319-11	CERAMIC CHIP	0.1UF		50V
C7558	1-126-947-11	ELECT	47UF	20.00%	16V
C7559	1-126-967-11	ELECT	47UF	20.00%	50V
C7560	1-163-031-91	CERAMIC CHIP	0.01UF		50V
C7561	1-126-963-11	ELECT	4.7UF	20.00%	50V
C7562	1-126-933-11	ELECT	100UF	20.00%	16V
C7601	1-104-708-11	MYLAR	0.47UF	20.00%	250V
C7602	1-109-835-11	MYLAR	0.68UF	20.00%	250V
C7654	1-117-703-11	CERAMIC	0.0047UF	99%	250V
		<CONNECTOR>			
CN7401 *	1-564-509-11	PLUG, CONNECTOR 6P			
CN7402 *	1-764-333-11	PLUG, CONNECTOR 10P			
CN7403 *	1-564-510-11	PLUG, CONNECTOR 7P			
CN7501 *	1-564-511-11	PLUG, CONNECTOR 8P			
CN7502	1-564-505-11	PLUG, CONNECTOR 2P			
CN7601	1-580-843-11	PIN, CONNECTOR (POWER)			
CN7602	1-580-843-11	PIN, CONNECTOR (POWER)			
CN7603	1-695-915-11	TAB (CONTACT)			
		<DIODE>			
D7300	8-719-158-35	RD9.1S-B			
D7401	8-719-158-35	RD9.1S-B			
D7402	8-719-158-35	RD9.1S-B			
D7403	8-719-158-35	RD9.1S-B			
D7404	8-719-158-35	RD9.1S-B			
D7405	8-719-158-35	RD9.1S-B			
D7406	8-719-158-35	RD9.1S-B			
D7407	8-719-158-35	RD9.1S-B			
D7408	8-719-158-35	RD9.1S-B			
D7409	8-719-158-35	RD9.1S-B			
D7410	8-719-158-35	RD9.1S-B			
D7411	8-719-158-35	RD9.1S-B			
D7412	8-719-914-42	DA204K			
D7413	8-719-158-35	RD9.1S-B			
D7501	8-719-158-35	RD9.1S-B			
D7502	8-719-158-35	RD9.1S-B			
D7503	8-719-158-35	RD9.1S-B			
D7504	8-719-158-35	RD9.1S-B			

REF NO.	PART NO.	DESCRIPTION	REMARK
		<FUSE>	
F7601	1-532-299-00	FUSE, TIME-LAG 5A/250V	
		<IC>	
IC7203	8-759-553-40	TDA7429S	
IC7204	8-759-100-96	UPC4558G2	
IC7501	8-759-009-07	MC14053BF	
IC7503	8-759-711-23	NJM2234L	
		<JACK>	
J7402	1-778-388-11	JACK BLOCK, PIN 9P	
J7403	1-784-646-11	TERMINAL, S	
		<CHIP CONDUCTOR>	
JR7200	1-216-295-91	SHORT CHIP 0	
JR7203	1-216-295-91	SHORT CHIP 0	
JR7204	1-216-295-91	SHORT CHIP 0	
JR7206	1-216-295-91	SHORT CHIP 0	
JR7208	1-216-295-91	SHORT CHIP 0	
JR7209	1-216-295-91	SHORT CHIP 0	
JR7212	1-216-295-91	SHORT CHIP 0	
JR7401	1-216-295-91	SHORT CHIP 0	
JR7403	1-216-295-91	SHORT CHIP 0	
JR7404	1-216-295-91	SHORT CHIP 0	
JR7503	1-216-295-91	SHORT CHIP 0	
JR7504	1-216-295-91	SHORT CHIP 0	
JR7506	1-216-295-91	SHORT CHIP 0	
JR7507	1-216-295-91	SHORT CHIP 0	
JR7509	1-216-295-91	SHORT CHIP 0	
JR7510	1-216-295-91	SHORT CHIP 0	
		<COIL>	
L7204	1-414-856-11	INDUCTOR 10UH	
L7301	1-414-189-31	INDUCTOR 100UH	
L7501	1-414-856-11	INDUCTOR 10UH	
L7506	1-414-857-11	INDUCTOR 100UH	
L7507	1-414-187-11	INDUCTOR 47UH	
L7508	1-414-187-11	INDUCTOR 47UH	
L7509	1-414-857-11	INDUCTOR 100UH	
L7510	1-414-187-11	INDUCTOR 47UH	
L7511	1-414-187-11	INDUCTOR 47UH	
L7512	1-414-856-11	INDUCTOR 10UH	
L7513	1-414-856-11	INDUCTOR 10UH	
		<TRANSISTOR>	
Q7309	8-729-010-25	MSD601-RT1	
Q7310	8-729-010-25	MSD601-RT1	
Q7401	8-729-424-67	UN2216	
Q7402	8-729-424-67	UN2216	
Q7403	8-729-216-22	2SA1162-G	
Q7404	8-729-216-22	2SA1162-G	
Q7501	8-729-010-25	MSD601-RT1	
Q7502	8-729-216-22	2SA1162-G	
Q7503	8-729-010-25	MSD601-RT1	
Q7505	8-729-010-25	MSD601-RT1	

B9

REF NO.	PART NO.	DESCRIPTION			REMARK
Q7507	8-729-216-22	2SA1162-G			
Q7509	8-729-010-25	MSD601-RT1			
Q7510	8-729-010-25	MSD601-RT1			
Q7511	8-729-216-22	2SA1162-G			
Q7514	8-729-010-25	MSD601-RT1			
Q7515	8-729-010-25	MSD601-RT1			
Q7516	8-729-216-22	2SA1162-G			
Q7520	8-729-010-25	MSD601-RT1			
Q7522	8-729-010-25	MSD601-RT1			
Q7523	8-729-216-22	2SA1162-G			
		<RESISTOR>			
R7215	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R7216	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R7217	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R7218	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R7219	1-216-025-11	RES-CHIP	100	5%	1/10W
R7220	1-216-025-11	RES-CHIP	100	5%	1/10W
R7221	1-216-689-11	RES-CHIP	39K	5%	1/10W
R7222	1-216-689-11	RES-CHIP	39K	5%	1/10W
R7223	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R7224	1-216-073-91	RES-CHIP	10K	5%	1/10W
R7225	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R7226	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R7238	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R7239	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R7240	1-216-689-11	RES-CHIP	39K	5%	1/10W
R7241	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R7242	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R7243	1-216-689-11	RES-CHIP	39K	5%	1/10W
R7334	1-216-022-00	RES-CHIP	75	5%	1/10W
R7335	1-216-033-00	RES-CHIP	220	5%	1/10W
R7336	1-216-041-00	RES-CHIP	470	5%	1/10W
R7337	1-216-045-00	RES-CHIP	680	5%	1/10W
R7339	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R7341	1-216-045-00	RES-CHIP	680	5%	1/10W
R7342	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7343	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R7344	1-216-073-91	RES-CHIP	10K	5%	1/10W
R7401	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7402	1-216-073-91	RES-CHIP	10K	5%	1/10W
R7403	1-216-073-91	RES-CHIP	10K	5%	1/10W
R7404	1-216-073-91	RES-CHIP	10K	5%	1/10W
R7405	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7406	1-216-073-91	RES-CHIP	10K	5%	1/10W
R7407	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7408	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7409	1-216-041-00	RES-CHIP	470	5%	1/10W
R7410	1-216-113-00	RES-CHIP	470K	5%	1/10W
R7411	1-216-113-00	RES-CHIP	470K	5%	1/10W
R7412	1-216-041-00	RES-CHIP	470	5%	1/10W
R7413	1-216-021-00	RES-CHIP	68	5%	1/10W
R7414	1-216-113-00	RES-CHIP	470K	5%	1/10W
R7415	1-216-113-00	RES-CHIP	470K	5%	1/10W
R7416	1-216-089-91	RES-CHIP	47K	5%	1/10W
R7417	1-216-089-91	RES-CHIP	47K	5%	1/10W
R7418	1-216-113-00	RES-CHIP	470K	5%	1/10W
R7419	1-216-022-00	RES-CHIP	75	5%	1/10W
R7420	1-216-113-00	RES-CHIP	470K	5%	1/10W
R7421	1-216-077-91	RES-CHIP	15K	5%	1/10W
R7422	1-216-077-91	RES-CHIP	15K	5%	1/10W
R7423	1-216-113-00	RES-CHIP	470K	5%	1/10W
R7424	1-216-022-00	RES-CHIP	75	5%	1/10W
R7425	1-216-033-00	RES-CHIP	220	5%	1/10W
R7426	1-216-033-00	RES-CHIP	220	5%	1/10W
R7427	1-216-089-91	RES-CHIP	47K	5%	1/10W
R7428	1-216-113-00	RES-CHIP	470K	5%	1/10W
R7429	1-216-089-91	RES-CHIP	47K	5%	1/10W
R7430	1-216-113-00	RES-CHIP	470K	5%	1/10W
R7503	1-216-025-11	RES-CHIP	100	5%	1/10W
R7504	1-216-025-11	RES-CHIP	100	5%	1/10W
R7506	1-216-025-11	RES-CHIP	100	5%	1/10W
R7507	1-216-081-00	RES-CHIP	22K	5%	1/10W
R7508	1-216-073-91	RES-CHIP	10K	5%	1/10W
R7511	1-216-033-00	RES-CHIP	220	5%	1/10W
R7512	1-216-005-00	RES-CHIP	15	5%	1/10W
R7515	1-216-041-00	RES-CHIP	470	5%	1/10W
R7516	1-216-025-11	RES-CHIP	100	5%	1/10W
R7517	1-216-075-00	RES-CHIP	12K	5%	1/10W
R7520	1-216-079-00	RES-CHIP	18K	5%	1/10W
R7522	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7523	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7528	1-216-033-00	RES-CHIP	220	5%	1/10W
R7529	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R7531	1-216-045-00	RES-CHIP	680	5%	1/10W
R7537	1-216-041-00	RES-CHIP	470	5%	1/10W
R7538	1-216-041-00	RES-CHIP	470	5%	1/10W
R7540	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7541	1-216-041-00	RES-CHIP	470	5%	1/10W
R7542	1-216-041-00	RES-CHIP	470	5%	1/10W
R7543	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7545	1-216-041-00	RES-CHIP	470	5%	1/10W
R7547	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7548	1-216-025-11	RES-CHIP	100	5%	1/10W
R7549	1-216-075-00	RES-CHIP	12K	5%	1/10W
R7551	1-216-081-00	RES-CHIP	22K	5%	1/10W
R7552	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7553	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7554	1-216-033-00	RES-CHIP	220	5%	1/10W
R7556	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7559	1-216-041-00	RES-CHIP	470	5%	1/10W
R7560	1-216-041-00	RES-CHIP	470	5%	1/10W
R7561	1-216-041-00	RES-CHIP	470	5%	1/10W
R7562	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7563	1-216-041-00	RES-CHIP	470	5%	1/10W
R7566	1-216-041-00	RES-CHIP	470	5%	1/10W
R7567	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7568	1-216-041-00	RES-CHIP	470	5%	1/10W
R7569	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7570	1-216-295-91	SHORT CHIP	0		
R7571	1-216-025-11	RES-CHIP	100	5%	1/10W
R7572	1-216-033-00	RES-CHIP	220	5%	1/10W
R7573	1-216-295-91	SHORT CHIP	0		
R7574	1-216-025-11	RES-CHIP	100	5%	1/10W
R7575	1-216-033-00	RES-CHIP	220	5%	1/10W
R7576	1-216-022-00	RES-CHIP	75	5%	1/10W
R7577	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R7578	1-216-025-11	RES-CHIP	100	5%	1/10W
R7579	1-216-295-91	SHORT CHIP	0		
R7580	1-216-022-00	RES-CHIP	75	5%	1/10W

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

B9 **C6**

REF NO.	PART NO.	DESCRIPTION			REMARK
R7582	1-216-295-91	SHORT CHIP	0		
R7583	1-216-073-91	RES-CHIP	10K	5%	1/10W
R7584	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R7601	1-202-719-00	SOLID	1M	10%	1/2W
		<TRANSFORMER>			
T7601	1-424-505-11	TRANSFORMER, LINE FILTER			
T7602	1-431-182-11	TRANSFORMER, LINE FILTER			
**********					
*	A-1401-120-A	C6 BOARD MOUNTED (KV-XA25M80A)			
*	A-1401-084-A	C6 BOARD MOUNTED (KV-XA29M80A)			
		**********			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CAPACITOR>			
C701	1-115-350-51	CERAMIC	0.0047UF		2KV
C702	1-102-074-00	CERAMIC	0.001UF	10.00%	50V
C708	1-102-114-00	CERAMIC	470PF	10.00%	50V
C709	1-102-114-00	CERAMIC	470PF	10.00%	50V
C710	1-102-114-00	CERAMIC	470PF	10.00%	50V
C712	1-102-115-00	CERAMIC	560PF	10.00%	50V
C713	1-102-112-00	CERAMIC	330PF	10.00%	50V
C714	1-102-113-00	CERAMIC (KV-XA25M80A)	390PF	10.00%	50V
C714	1-102-112-00	CERAMIC (KV-XA29M80A)	330PF	10.00%	50V
C716	1-126-933-11	ELECT	100UF	20.00%	16V
C717	1-107-651-11	ELECT	4.7UF	20.00%	250V
C718	1-102-106-00	CERAMIC (KV-XA29M80A ONLY)	100PF	10.00%	50V
C1800	1-126-964-11	ELECT	10UF	20.00%	50V
C1803	1-126-964-11	ELECT	10UF	20.00%	50V
C1804	1-126-964-11	ELECT	10UF	20.00%	50V
C1809	1-126-942-61	ELECT	1000UF	20.00%	25V
C1810	1-102-106-00	CERAMIC (KV-XA29M80A ONLY)	100PF	10.00%	50V
		<CONNECTOR>			
CN700	1-695-915-11	TAB (CONTACT)			
CN702	1-695-915-11	TAB (CONTACT)			
CN703 *	1-564-509-11	PLUG, CONNECTOR 6P			
CN704	1-695-915-11	TAB (CONTACT)			
CN712	1-564-507-11	PLUG, CONNECTOR 4P			
CN1801 *	1-564-509-11	PLUG, CONNECTOR 6P			
CN1802 *	1-564-506-11	PLUG, CONNECTOR 3P			
		<DIODE>			
D701	8-719-911-19	1SS119-25			
D702	8-719-911-19	1SS119-25			
D703	8-719-911-19	1SS119-25			
D704	8-719-911-19	1SS119-25			
D705	8-719-911-19	1SS119-25			
D706	8-719-911-19	1SS119-25			
D707	8-719-911-19	1SS119-25			
D708	8-719-911-19	1SS119-25			

REF NO.	PART NO.	DESCRIPTION	REMARK
D709	8-719-911-19	1SS119-25	
D710	8-719-911-19	1SS119-25	
D711	8-719-911-19	1SS119-25	
D712	8-719-911-19	1SS119-25	
D716	8-719-911-19	1SS119-25	
D717	8-719-929-15	HZS9.1NB2 (KV-XA25M80A)	
D717	8-719-070-16	NNCD9.1A-T1 (KV-XA29M80A)	
D1803	8-719-911-19	1SS119-25	
D1804	8-719-911-19	1SS119-25	
D1808	8-719-908-03	GP08D	
		<IC>	
IC1800	8-759-822-38	LA6510	
		<JACK>	
J701 ⚠	1-540-071-22	SOCKET, CRT	
		<COIL>	
L701	1-410-667-31	INDUCTOR	22UH
L703	1-414-187-11	INDUCTOR	47UH (KV-XA25M80A)
L703	1-414-186-31	INDUCTOR	33UH (KV-XA29M80A)
L705	1-414-186-31	INDUCTOR	33UH
L707	1-414-187-11	INDUCTOR	47UH
		<TRANSISTOR>	
Q701	8-729-326-11	2SC2611	
Q702	8-729-326-11	2SC2611	
Q703	8-729-326-11	2SC2611	
Q704	8-729-326-11	2SC2611	
Q705	8-729-326-11	2SC2611	
Q706	8-729-326-11	2SC2611	
Q707	8-729-200-17	2SA1091-O	
Q708	8-729-200-17	2SA1091-O	
Q709	8-729-200-17	2SA1091-O	
Q710	8-729-119-78	2SC2785-HFE	
Q711	8-729-119-78	2SC2785-HFE	
Q712	8-729-119-78	2SC2785-HFE	
Q714	8-729-255-12	2SC2551-O	
Q1800	8-729-119-76	2SA1175-HFE	
Q1802	8-729-119-78	2SC2785-HFE	
		<RESISTOR>	

R701	1-219-752-11	CARBON	100K	5%	1/2W
R705	1-216-392-11	METAL OXIDE	1.8	5%	3W
R710	1-215-923-00	METAL OXIDE	10K	5%	3W
R711	1-260-330-11	CARBON (KV-XA25M80A)	1.5K	5%	1/2W
R711	1-260-328-11	CARBON (KV-XA29M80A)	1K	5%	1/2W
R712	1-215-923-00	METAL OXIDE	10K	5%	3W
R713	1-260-330-11	CARBON	1.5K	5%	1/2W
R714	1-215-923-00	METAL OXIDE	10K	5%	3W
R715	1-260-330-11	CARBON	1.5K	5%	1/2W
R716	1-249-405-11	CARBON	100	5%	1/4W
R717	1-249-405-11	CARBON	100	5%	1/4W
R718	1-249-405-11	CARBON	100	5%	1/4W
R719	1-215-469-00	METAL	100K	1%	1/4W

C6 D3 (KV-XA29M80A ONLY)

REF NO.	PART NO.	DESCRIPTION		REMARK	
R720	1-249-923-11	CARBON	1K	5%	1/4W
R722	1-249-923-11	CARBON	1K	5%	1/4W
R723	1-215-485-00	METAL (KV-XA25M80A)	470K	1%	1/4W
R723	1-215-469-00	METAL (KV-XA29M80A)	100K	1%	1/4W
R724	1-249-923-11	CARBON	1K	5%	1/4W
R725	1-249-424-11	CARBON	3.9K	5%	1/4W
R726	1-249-424-11	CARBON	3.9K	5%	1/4W
R727	1-249-424-11	CARBON	3.9K	5%	1/4W
R728	1-249-408-11	CARBON	180	5%	1/4W
R729	1-249-408-11	CARBON	180	5%	1/4W
R730	1-249-408-11	CARBON	180	5%	1/4W
R731	1-249-401-11	CARBON	47	5%	1/4W
R732	1-249-401-11	CARBON	47	5%	1/4W
R733	1-249-401-11	CARBON	47	5%	1/4W
R734	1-219-743-11	CARBON	100	5%	1/2W
R738	1-247-807-31	CARBON	100	5%	1/4W
R739	1-247-807-31	CARBON	100	5%	1/4W
R740	1-247-807-31	CARBON	100	5%	1/4W
R747	1-215-926-00	METAL OXIDE	33K	5%	3W
R749	1-215-927-00	METAL OXIDE	47K	5%	3W
R751	1-216-490-11	METAL OXIDE (KV-XA25M80A)	39K	5%	3W
R751	1-215-926-00	METAL OXIDE (KV-XA29M80A)	33K	5%	3W
R753	1-249-429-11	CARBON	10K	5%	1/4W
R755	1-249-427-11	CARBON	6.8K	5%	1/4W
R756	1-249-427-11	CARBON	6.8K	5%	1/4W
R757	1-249-427-11	CARBON	6.8K	5%	1/4W
R758	1-249-419-11	CARBON	1.5K	5%	1/4W
R759	1-249-419-11	CARBON	1.5K	5%	1/4W
R760	1-249-419-11	CARBON	1.5K	5%	1/4W
R1800	1-249-417-11	CARBON	1K	5%	1/4W
R1801	1-249-426-11	CARBON	5.6K	5%	1/4W
R1802	1-249-387-11	CARBON (KV-XA25M80A)	3.3	5%	1/4W
R1802	1-249-382-11	CARBON (KV-XA29M80A)	1.2	5%	1/4W
R1803	1-249-387-11	CARBON (KV-XA25M80A)	3.3	5%	1/4W
R1803	1-249-382-11	CARBON (KV-XA29M80A)	1.2	5%	1/4W
R1805	1-249-429-11	CARBON	10K	5%	1/4W
R1806	1-249-425-11	CARBON	4.7K	5%	1/4W
R1808	1-249-425-11	CARBON	4.7K	5%	1/4W
R1809	1-249-435-11	CARBON	33K	5%	1/4W
R1810	1-249-435-11	CARBON	33K	5%	1/4W
R1811	1-249-435-11	CARBON (KV-XA25M80A)	33K	5%	1/4W
R1811	1-249-433-11	CARBON (KV-XA29M80A)	22K	5%	1/4W
R1812	1-249-435-11	CARBON	33K	5%	1/4W
R1821	1-249-435-11	CARBON (KV-XA25M80A)	33K	5%	1/4W
R1821	1-249-433-11	CARBON (KV-XA29M80A)	22K	5%	1/4W
R1822	1-249-435-11	CARBON	33K	5%	1/4W
R1823	1-249-426-11	CARBON	5.6K	5%	1/4W
R1824	1-249-435-11	CARBON	33K	5%	1/4W
R1825	1-247-843-11	CARBON	3.3K	5%	1/4W

REF NO.	PART NO.	DESCRIPTION	REMARK
		<VARIABLE RESISTOR>	
RV702	1-241-656-11	RES, ADJ, METAL FILM 110M	
RV1801	1-238-019-11	RES, ADJ, CARBON 47K	
**********			
*	A-1401-085-A	D3 BOARD MOUNTED (KV-XA29M80A ONLY)	
		**********	
		<CAPACITOR>	
C2800	1-126-947-11	ELECT 47UF	20.00% 25V
C2801	1-106-220-00	MYLAR 0.1UF	10.00% 100V
C2802	1-136-155-00	FILM 0.015UF	5.00% 50V
C2803	1-129-723-00	FILM 0.056UF	5.00% 630V
C2805	1-126-947-11	ELECT 47UF	20.00% 25V
C2806	1-106-383-00	MYLAR 0.047UF	5.00% 100V
C2807	1-137-194-81	FILM 0.47UF	5.00% 50V
C2808	1-126-964-11	ELECT 10UF	20.00% 50V
C2809	1-137-194-81	FILM 0.47UF	5.00% 50V
C2810	1-106-375-12	MYLAR 0.022UF	10.00% 250V
C2811	1-126-964-11	ELECT 10UF	20.00% 50V
C2812	1-126-964-11	ELECT 10UF	20.00% 50V
C2813	1-129-708-91	FILM 0.0033UF	5.00% 630V
		<CONNECTOR>	
CN2800 *	1-564-510-11	PLUG, CONNECTOR 7P	
CN2802 *	1-564-506-11	PLUG, CONNECTOR 3P	
CN2803	1-695-915-11	TAB (CONTACT)	
		<DIODE>	
D2800	8-719-302-43	EL1Z	
D2801	8-719-911-19	1SS119-25	
D2802	8-719-911-19	1SS119-25	
D2803	8-719-911-19	1SS119-25	
		<IC>	
IC2800	8-759-701-59	NJM78M09FA	
IC2801	8-759-998-98	LM358D	
		<COIL>	
L2800	1-406-989-71	INDUCTOR 0UH	
L2802	1-406-987-21	INDUCTOR 4.7MH	
L2803	1-406-986-21	INDUCTOR 3.3UH	
L2804	1-406-678-11	INDUCTOR 15MH	
		<TRANSISTOR>	
Q2800	8-729-119-78	2SC2785-HFE	
Q2801	8-729-195-82	2SC2958	
Q2802	8-729-017-06	2SC4793	
Q2803	8-729-216-22	2SA1162-G	
Q2804	8-729-010-25	MSD601-RT1	

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

D3 (KV-XA29M80A ONLY) H J

REF NO.	PART NO.	DESCRIPTION			REMARK
		<RESISTOR>			
R2800	1-249-405-11	CARBON	100	5%	1/4W
R2802	1-260-111-11	CARBON	10K	5%	1/2W
R2803	1-260-111-11	CARBON	10K	5%	1/2W
R2804	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R2805	1-216-097-11	RES-CHIP	100K	5%	1/10W
R2806	1-249-421-11	CARBON	2.2K	5%	1/4W
R2807	1-249-420-11	CARBON	1.8K	5%	1/4W
R2808	1-215-857-71	METAL OXIDE	10	5%	1W
R2809	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R2810	1-216-049-11	RES-CHIP	1K	5%	1/10W
R2811	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R2812	1-216-081-00	RES-CHIP	22K	5%	1/10W
R2813	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R2814	1-216-121-11	RES-CHIP	1M	5%	1/10W
R2815	1-216-085-91	RES-CHIP	33K	5%	1/10W
R2816	1-216-107-00	RES-CHIP	270K	5%	1/10W
R2817	1-216-107-00	RES-CHIP	270K	5%	1/10W
		<TRANSFORMER>			
T2800	1-413-059-00	TRANSFORMER, FERRITE (DFT)			
**********					
*	A-1401-086-A	H BOARD MOUNTED			
		**********			
*	4-055-304-01	HOLDER, LED			
		<CAPACITOR>			
C3910	1-126-947-11	ELECT	47UF	20.00%	16V
C3911	1-126-947-11	ELECT	47UF	20.00%	16V
C3912	1-102-114-00	CERAMIC	470PF	10.00%	50V
		<CONNECTOR>			
CN3601 *	1-580-844-11	PIN, CONNECTOR (POWER)			
CN3602 *	1-580-844-11	PIN, CONNECTOR (POWER)			
CN3901 *	1-564-507-11	PLUG, CONNECTOR 4P			
CN3902	1-564-509-11	PLUG, CONNECTOR 6P			
CN3904 *	1-564-512-11	PLUG, CONNECTOR 9P			
CN3905 *	1-564-512-11	PLUG, CONNECTOR 9P			
		<DIODE>			
D3905	8-719-070-16	NNCD9.1A-T1			
D3906	8-719-083-18	DIODE SPB-25MVWF			
D3908	8-719-070-16	NNCD9.1A-T1			
		<IC>			
IC3901	8-742-225-20	IC SBX3081-21			
		<JACK>			
J3901	1-750-264-11	JACK			
J3903	1-770-329-12	JACK, PIN 3P			

REF NO.	PART NO.	DESCRIPTION			REMARK
		<TRANSISTOR>			
Q3901	8-729-030-02	DTC144ESA			
Q3902	8-729-030-02	DTC144ESA			
		<RESISTOR>			
R3907	1-249-426-11	CARBON	5.6K	5%	1/4W
R3908	1-249-413-11	CARBON	470	5%	1/4W
R3909	1-249-417-11	CARBON	1K	5%	1/4W
R3910	1-249-420-11	CARBON	1.8K	5%	1/4W
R3911	1-249-411-11	CARBON	330	5%	1/4W
R3912	1-247-843-11	CARBON	3.3K	5%	1/4W
R3913	1-249-429-11	CARBON	10K	5%	1/4W
R3914	1-249-411-11	CARBON	330	5%	1/4W
R3915	1-249-429-11	CARBON	10K	5%	1/4W
R3916	1-249-401-11	CARBON	47	5%	1/4W
R3920	1-247-807-31	CARBON	100	5%	1/4W
R3921	1-247-807-31	CARBON	100	5%	1/4W
		<SWITCH>			
S3601 ⚠	1-571-433-31	SWITCH, PUSH (AC POWER)			
S3902	1-692-431-21	SWITCH, TACTILE			
S3903	1-692-431-21	SWITCH, TACTILE			
S3904	1-692-431-21	SWITCH, TACTILE			
S3905	1-692-431-21	SWITCH, TACTILE			
S3906	1-692-431-21	SWITCH, TACTILE			
S3907	1-692-431-21	SWITCH, TACTILE			
S3908	1-692-431-21	SWITCH, TACTILE			
**********					
*	A-1401-087-A	J BOARD MOUNTED			
		**********			
		<CAPACITOR>			
C2410	1-126-967-11	ELECT	47UF	20.00%	50V
C2411	1-126-967-11	ELECT	47UF	20.00%	50V
C2412	1-126-967-11	ELECT	47UF	20.00%	50V
C2413	1-102-112-00	CERAMIC	330PF	10.00%	50V
C2414	1-102-112-00	CERAMIC	330PF	10.00%	50V
C2418	1-126-960-11	ELECT	1UF	20.00%	50V
C2419	1-126-960-11	ELECT	1UF	20.00%	50V
		<CONNECTOR>			
CN2410 *	1-564-523-11	PLUG, CONNECTOR 8P			
		<DIODE>			
D2410	8-719-070-16	NNCD9.1A-T1			
D2411	8-719-070-16	NNCD9.1A-T1			
D2412	8-719-070-16	NNCD9.1A-T1			
D2414	8-719-070-16	NNCD9.1A-T1			
D2415	8-719-070-16	NNCD9.1A-T1			
		<JACK>			
J2410	1-784-623-11	BLOCK, PIN JACK 5P			

J VM1

REF NO.	PART NO.	DESCRIPTION			REMARK
		<RESISTOR>			
R2410	1-247-804-11	CARBON	75	5%	1/4W
R2411	1-247-804-11	CARBON	75	5%	1/4W
R2412	1-247-804-11	CARBON	75	5%	1/4W
R2414	1-247-887-00	CARBON	220K	5%	1/4W
R2415	1-249-431-11	CARBON	15K	5%	1/4W
R2417	1-247-887-00	CARBON	220K	5%	1/4W
R2418	1-249-431-11	CARBON	15K	5%	1/4W
R2419	1-249-409-11	CARBON	220	5%	1/4W
R2420	1-249-409-11	CARBON	220	5%	1/4W
R2421	1-249-409-11	CARBON	220	5%	1/4W
**********					
*	A-1401-121-A	VM1 BOARD MOUNTED (KV-XA25M80A)			
*	A-1401-088-A	VM1 BOARD MOUNTED (KV-XA29M80A)			
		**********			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CAPACITOR>			
C5902	1-104-661-91	ELECT	330UF	20.00%	16V
C5903	1-161-830-00	CERAMIC	0.0047UF		500V
C5905	1-126-935-11	ELECT	470UF	20.00%	10V
C5906	1-130-491-00	MYLAR	0.047UF	5.00%	50V
C5907	1-107-638-11	ELECT	33UF	20.00%	160V
C5908	1-106-383-00	MYLAR	0.047UF	10.00%	200V
C5909	1-126-933-11	ELECT	100UF	20.00%	16V
C5910	1-130-471-00	MYLAR	0.001UF	5.00%	50V
C5911	1-107-949-11	ELECT	2.2UF	20.00%	160V
C5912	1-104-999-11	MYLAR	0.1UF	10.00%	200V
C5913	1-130-471-00	MYLAR	0.001UF	5.00%	50V
C5914	1-126-933-11	ELECT	100UF	20.00%	16V
C5916	1-130-491-00	MYLAR	0.047UF	5.00%	50V
C5917	1-126-935-11	ELECT	470UF	20.00%	10V
C5918	1-115-341-51	CERAMIC	120PF	10.00%	500V
C5920	1-126-964-11	ELECT	10UF	20.00%	50V
C5921	1-102-852-91	CERAMIC	47PF	5.00%	50V
		<CONNECTOR>			
CN2801 *	1-564-506-11	PLUG, CONNECTOR 3P (KV-XA29M80A ONLY)			
CN5901 *	1-564-510-11	PLUG, CONNECTOR 7P			
CN5904 *	1-770-723-11	CONNECTOR, BOARD TO BOARD 8P			
		<DIODE>			
D5901	8-719-911-19	1SS119-25			
D5902	8-719-110-86	RD39ES-B			
D5903	8-719-911-19	1SS119-25			
D5904	8-719-110-86	RD39ES-B			
D5905	8-719-911-19	1SS119-25			
D5906	1-249-406-11	CARBON	120	5%	1/4W
D5907	1-249-406-11	CARBON	120	5%	1/4W

REF NO.	PART NO.	DESCRIPTION			REMARK
		<COIL>			
L5901	1-414-187-11	INDUCTOR	47UH		
L5902	1-414-856-11	INDUCTOR	10UH		
		<TRANSISTOR>			
Q5901	8-729-230-45	2SC2458-YGR			
Q5902	8-729-809-26	2SA1606-E			
Q5903	8-729-230-45	2SC2458-YGR			
Q5904	8-729-119-76	2SA1175-HFE			
Q5905	8-729-230-45	2SC2458-YGR			
Q5906	8-729-809-29	2SC4159-E			
Q5908	8-729-119-78	2SC2785-HFE			
Q5909	8-729-119-78	2SC2785-HFE			
		<RESISTOR>			
R5901	1-249-409-11	CARBON	220	5%	1/4W
R5902	1-249-414-11	CARBON	560	5%	1/4W
R5903	1-247-734-11	CARBON	39	5%	1/2W
R5904	1-249-411-11	CARBON	330	5%	1/4W
R5905	1-249-417-11	CARBON	1K	5%	1/4W
R5906	1-249-417-11	CARBON	1K	5%	1/4W
R5907	1-249-417-11	CARBON	1K	5%	1/4W
R5908	1-249-383-11	CARBON	1.5	5%	1/4W
R5909	1-249-409-11	CARBON	220	5%	1/4W
R5910	1-249-403-11	CARBON	68	5%	1/4W
R5911	1-249-439-11	CARBON	68K	5%	1/4W
R5912	1-249-437-11	CARBON	47K	5%	1/4W
R5914	1-249-403-11	CARBON	68	5%	1/4W
R5915	1-249-429-11	CARBON	10K	5%	1/4W
R5916	1-249-419-11	CARBON	1.5K	5%	1/4W
R5917	1-249-416-11	CARBON	820	5%	1/4W
R5918	1-249-429-11	CARBON	10K	5%	1/4W
R5919	1-249-417-11	CARBON	1K	5%	1/4W
R5920	1-249-439-11	CARBON	68K	5%	1/4W
R5921	1-216-476-11	METAL OXIDE	180	5%	3W
R5922	1-249-414-11	CARBON	560	5%	1/4W
R5923	1-249-383-11	CARBON	1.5	5%	1/4W
R5925	1-249-400-11	CARBON	39	5%	1/4W
R5929	1-215-880-00	METAL OXIDE	10	5%	2W
R5930	1-249-413-11	CARBON	470	5%	1/4W
R5931	1-249-413-11	CARBON	470	5%	1/4W
R5932	1-249-413-11	CARBON	470	5%	1/4W
R5933	1-249-413-11	CARBON	470	5%	1/4W
R5934	1-249-430-11	CARBON	12K	5%	1/4W
R5935	1-249-429-11	CARBON	10K	5%	1/4W
**********					

REF NO.	PART NO.	DESCRIPTION	REMARK
		ACCESSORIES AND PACKING MATERIALS	
		**********	
	3-701-910-00	SCREW, SPECIAL (DIA. 3.8X20)	
	4-088-972-11	MANUAL, INSTRUCTION	
	4-392-003-51	BAND, HOLD	
		**********	

REF NO.	PART NO.	DESCRIPTION	REMARK
		BATTERY COVER REMOTE COMMANDER	
		**********	
	1-418-163-61	REMOTE COMMANDER (RM-952)	
	9-939-697-01	BATTERY COVER REMOTE COMMANDER	

Sony Corporation
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Visual Products

9-872-309-01

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